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PROGRAMME OF WORK OF THE INTERGOVERNMENTAL WORKING GROUP OF EXPERTS ON INTERNATIONAL STANDARDS OF ACCOUNTING AND REPORTING: DISCUSSION OF ACCOUNTING AND REPORTING ISSUES IDENTIFIED DURING THE SEVENTH SESSION

Information disclosure relating to environmental measures

Report of the Secretary-General

SUMMARY

Public concern about the environment has led to new national legislation and international accords. In the area of accounting and reporting there are no standards which specifically deal with information disclosure relating to environmental protection measures. It appears that the users of financial statements have no way of judging how or to what degree enterprises are responding to increased demands for environmental protection. Thus, the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting has requested that a review be undertaken of environmental reporting regulations and practices in 10 countries to determine what information the preparers of financial statements are disclosing to users in the area of environmental protection. Without such information, the users might not have a "true and fair" view of the enterprise's position and performance. The review was carried out by means of a questionnaire that was sent to 20 enterprises in 10 countries (Brazil, Canada,

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Federal Republic of Germany, India, Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States) in sectors that have clear environmental impacts, such as oil, chemicals, pharmaceuticals and metals. In addition, Arthur Andersen & Co. offices in the various countries responded to a supplementary questionnaire that described the relevant accounting standards in those countries. The present report summarizes the findings of the questionnaires and makes recommendations about what should be disclosed in financial statements to give users a "true and fair" view of the enterprise's financial situation.

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INTRODUCTION

1. The Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting requested that a review be undertaken of environmental accounting and reporting regulations and practices in 10 countries to determine what information the preparers of financial statements should disclose to users in the area of environmental protection in order to give the users a "true and fair" view of the enterprise's position and performance.

2. The review was carried out by means of a questionnaire sent to 20 enterprises in 10 countries (Brazil, Canada, Federal Republic of Germany, India, Netherlands, Norway, Sweden, Switzerland, the United Kingdom and the United States) in sectors that have a clear environmental impact, such as oil, chemicals, pharmaceuticals and metals. In addition, Arthur Andersen & Co. offices in the various countries responded to a supplementary questionnaire that described the relevant accounting standards in those countries. The present report summarizes the findings of the questionnaires and makes recommendations about what should be disclosed and how, in order to give users a true and fair view of the enterprise's financial situation.

3. It should be noted that the selection of countries and enterprises to be reviewed was necessarily limited. The intent was to obtain a somewhat representative sample of enterprises and countries but not a comprehensive one.

I. REVIEW OF ENVIRONMENTAL LAWS AND REGULATIONS IN THE VARIOUS COUNTRIES

4. Each of the countries included in the review of environmental reporting has a regulatory body responsible for environmental regulation. In some cases, federal, state and provincial regulatory bodies exist. Regulations tend to be directed towards compliance with certain allowable levels of pollution and do not specify any particular accounting treatment.

5. The various regulatory bodies use the following techniques to enforce the regulations:

(a) Mandatory self-reporting;

(b) Scheduled and unscheduled visits by authorities;

(c) Regular mandatory testing at locations to detect harmful releases to the environment;

(d) Advance approval to begin specific operations which will have an environmental impact;

(e) Reaction to publicized events and private reports.

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6. Penalties for non-compliance include the following:

(a) Correction of problem within a given time frame;

(b) Imposition of fines (e.g. if certain emission levels are exceeded);

(c) Potential prison terms for key management persons;

(d) Prohibition of operations if compliance is not achieved.

7. In cases of a mandatory clean-up, the enterprises responsible for the pollution bear the financial responsibility for the clean-up. In the United States, the Environmental Protection Agency has identified certain sites for clean-up (so-called "Superfund" sites) for which potentially responsible parties (PRPs) are identified. An estimate of how much each PRP deposited at the site and that amount as a percent of the total waste deposited at the site determines their share of any damages or clean-up cost. In the event PRPs are unable to pay for the clean-up, the federal Government or state and local governments would have to fund any necessary clean-up. Similar legislation is being considered in Canada. A new law for liability in environmental impacts is also being considered in the Federal Republic of Germany.

8. In countries other than the United States, environmental risk insurance coverage is generally available. Some United States enterprises have a funding arrangement with insurance companies under which environmental payments would be covered under a policy. However, that policy would require full reimbursement to the insurance companies by the insured in subsequent years.

II. REVIEW OF ACCOUNTING STANDARDS IN VARIOUS COUNTRIES RELEVANT TO ENVIRONMENTAL MEASURES

9. The term "environmental measures" is difficult to define. It is difficult to distinguish between measures taken for environmental reasons and those taken during the course of normal business operations or for normal investment purposes. For purposes of the report, however, environmental measures include those undertaken to:

(a) Minimize, eliminate, prevent or clean up the harmful effects of pollution and noxious emissions;

(b) Develop and utilize cleaner technologies;

(c) Conserve non-renewable resources, such as fossil fuels and the ozone layer;

(d) Develop technologies to substitute for non-renewable resources;

(e) Maintain, renew, replace or conserve renewable resources, such as water and forests (especially in areas subject to a critical balance of supplies) and clean air;

(f) Reduce or eliminate the possibility of catastrophes, such as oil spills or gas explosions, as well as chemical and nuclear explosions;

(g) Clean up or minimize the harmful effects of catastrophes should they occur, or provide funds and resources to accommodate such eventualities on a priority basis;

(h) Educate and encourage management, employees, suppliers and the public at large to be alert to potential sources of harm to the environment and to employ conservation measures;

(i) Develop an environmental policy and programmes;

(j) Undertake environmental audits and risk assessments, and formulate appropriate contingency plans.

10. In the countries surveyed, no accounting standards specific to environmental measures were noted. Norway does, however, require the Board of Directors in their annual report (which is an integral part of the financial statements) to disclose what impact the enterprise has on the environment and which measures it has undertaken in that regard.

11. Those accounting standards that are applicable to environmental measures generally relate to accounting for contingent liabilities, as further described below.

A. Accounting for current and actual expenditures

1. Operating expenses

12. Operating expenses relating to environmental protection or clean-up are recorded immediately in most countries, although in India, extraordinary one-time expenses can be deferred over a reasonable period. Such expenses are not separately identified so that expenditures on environmental measures cannot be precisely determined by the user of financial statements. (This also applies to capital expenses.)

2. Capital expenditures

13. Capital expenditures relating to the environment can be treated in a number of ways:

(a) Equipment purchased is treated as a capitalized item and depreciated; a number of countries permit accelerated depreciation for capital expenses relating to the environment;

(b) Expenditures which increase production capacity, increase the useful life or impart a higher salvage value also are capitalized; in some countries expenditures can be capitalized only if an asset is created;

(c) Removal and site restoration costs are estimated and charged to income over the same period and on the same basis as related property, plant and equipment is amortized.

B. Accounting for future and probable expenditures

14. Liabilities (or contingent losses, where the outcome is considered probable) are recognized and accrued when they can be measured with reasonable accuracy; if a reasonable estimate cannot be made, but it is material, a disclosure in the notes is required. Liabilities are not accrued when the enterprise judges that they are not material. Enterprises which make a practice of accruing liabilities of which they are reasonably certain could be considered to be providing self insurance. The United States Securities and Exchange Commission requires that publicly held enterprises disclose all environmental liabilities, unless they can prove they will not be of material interest someday to investors.

15. Whether the expense related to these liabilities is deductible for tax purposes varies from country to country. However, in many cases, only those transactions which have been actually paid are deductible. As a result, in those countries where deferred tax accounting is common, a debit deferred tax is established which, in some cases, is not allowed to be recorded due to the principle of conservatism. For those countries where deferred taxes are not commonly provided for, the enterprises must show for financial statement purposes a loss of the entire amount of the expense, without a corresponding decrease in the annual tax provision. Only upon payment of the liability will the tax benefit be recognized (and realized).

16. The following summarizes the accounting standards and disclosure requirements applicable to environmental measures and tax implications of the accounting standards at the international and national level.

Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting

17. The Group agreed that the enterprise should provide a description of types of major or special environmental measures carried out, together with cost data where available.

International Accounting Standards

18. Under International Accounting Standard No. 10, contingent losses, if probable, should be accrued. The estimation of the amount to be accrued in the financial statements should be the best estimate within a range of amounts. If no estimate is indicated to be better than any other amount within the range, at least the minimum amount should be accrued. Disclosure of any additional exposure to loss is made if there is a possibility of loss in excess of the amount accrued. If there is conflicting or insufficient evidence on which to estimate the amount of a contingent loss, then disclosure is made of the existence and nature of the contingency.

Brazil

19. In Brazil, an enterprise is required to record liabilities when they become an effective risk or obligation. Current expenses are tax-deductible when recorded. If the enterprises acquire an asset as a consequence of environmental measures, the asset will be capitalized and the related depreciation is tax deductible.

20. Future liabilities are recorded only if they are recognized as such. Potential (low risk) liabilities may be accounted for as a reserve for contingencies classified in the shareholders' equity, as restricted retained earnings, if the liabilities have not yet been incurred and if they are retained earnings.

21. There are no tax incentives for environmental measures related to an enterprise's operations. Enterprises may promote environmental measures through conservation of parks or green areas. Incentives allow an enterprise to deduct the maintenance and operations of the green space while allowing the enterprise to advertise its name in connection with the green space.

22. The Brazilian Comissao de Valores Mobilarios (Securities and Exchange Commission) in P.O. #15/1987 recommends that the Board of Directors' report mention investments for environmental protection, but does not require further details. There are no other specific requirements for disclosure of environmental measures. Disclosures may occur if liabilities are expected, or if the continuity of the enterprise may be affected by the impossibility of solving certain environmental problems.

Canada

23. In Canada, the generally accepted accounting principles are codified in the Handbook of the Canadian Institute of Certified Accountants (CICA). According to Section 3290 of the Handbook:

> "... the appropriateness of accruing the effects of the contingent loss would be influenced by the extent to which the amount of the loss is known or can be reasonably estimated. If a reasonable estimate cannot be made, accrual could result in the inclusion in the financial statements so uncertain as to impair the integrity of those statements. ...
>
> "The existence of a contingent loss at the date of the financial statements should be disclosed in the notes to the financial statements when:
>
> (a) the occurrence of the confirming future event is likely, but the amount of the loss cannot be reasonably estimated; or
>
> (b) the occurrence of the confirming future event is likely and an accrual has been made but there exists an exposure to loss in excess of the amount accrued; or
>
> (c) the occurrence of the confirming future event is not determinable."

24. If the amount is not estimable, but material, disclosure in the notes is required which explains the current facts, enabling the reader to assess the impact or potential impact on the financial statements. Accounting for losses deemed to be unusual or non-routine would be disclosed as an extraordinary item.

25. The exposure draft on property, plant and equipment, issued in May 1989, proposes that "removal and site restoration costs should be estimated and charged to income over the same period and on the same basis as the related property, plant and equipment is amortized".

26. The proposals for annual information and management discussion and analysis that recently have been made by the Ontario Securities Commission require that "the financial or operational effect of environmental protection requirements on the capital expenditures, earnings and competitive position of the issuer for the current fiscal year and any specific impact on future years" be disclosed.

Federal Republic of Germany

27. In the Federal Republic of Germany, the HGB (German Commercial Law) section 249 specifies that accruals need only be set up for expected liabilities. Accruals which do not result in an expected liability (especially accruals for future expenses) are not tax-deductible. Although provisions for such accruals can be made in the commercial financial statements, it is common practice in the Federal Republic of Germany not to accrue for future expenses as they are not tax-deductible, and as the enterprises want to avoid having different accruals in the commercial balance sheet and the tax balance sheet.

28. An enterprise should, however, record liabilities or accruals for all expected expenses which have their economic reason in the current or prior years. The determination of the recorded liability or accrual depends upon the expected and justified obligation of the enterprise. Normally, a reasonable estimate, rather than a maximal estimate, is considered.

29. Expenses related to environmental measures are capitalizable and depreciable if an asset is created. Expenses for the repair of existing assets are not capitalizable. According to German Income Tax Law, investments in goods which serve the protection of the environment as approved by the public authorities can be depreciated on an accelerated basis over five years, with 60 per cent the first year and 10 per cent for the following years. Under section 281 of the HGB, such accelerated depreciation must be disclosed in the notes to the financial statements.

30. An enterprise is required to disclose in its notes to the financial statements and in the management report all events, both during the fiscal year and subsequent to the balance sheet date, which are necessary to give a true and fair view of the financial situation of the enterprise.

India

31. In India, a liability is recorded when it is recognized. Loss contingencies are accrued for, if probable. If possible, contingencies are disclosed in the

notes. If the likelihood of the contingency occurring is remote, it is ignored in the financial statements.

32. Expenses are normally recorded immediately in the year when incurred. Equipment purchased is treated as a capitalized item and is depreciated over the useful life of the equipment. Extraordinary, one-time expenses may be deferred over a "reasonable" period, determined in the light of the specific circumstances.

33. Expenditures are deductible for tax purposes in the year recorded. Plant and machinery used for pollution control may be depreciated at a 50 per cent rate. The concept of deferred tax accounting is not acceptable under Indian generally accepted accounting principles.

34. If a significant expense has been incurred during the year, it might be appropriate to include it as an extraordinary item in the profit and loss account. Any such item would be disclosed in the notes to the financial statements.

35. The Board of Director's report is not required to disclose any environmental measures taken. However, the Board may, at its discretion, include such information if deemed desirable.

Netherlands

36. In the Netherlands, liabilities, including those relating to environmental measures, are recorded when an obligation has been incurred that can be measured with reasonable accuracy. Liabilities that cannot be measured with reasonable accuracy, but whose effect may become material to the financial statements, are considered as contingent liabilities and disclosed in the notes to the financial statements. Immaterial contingent liabilities usually are not disclosed.

37. In general, expenditures which have one of the following positive effects on production qualify for capitalization:

(a) Higher capacity;

(b) Longer useful life;

(c) Higher salvage value.

38. The qualifying expenditures are capitalized and amortized over the (increased) useful life of the related production item, with the amortization period varying with the nature of the related asset. Expenditures which do not meet one of the above criteria do not qualify for capitalization and are usually charged to income as they arise. Depending on the specific situation, costs for environmental expenditures such as removal costs can either be capitalized or expensed.

39. Costs relating to environmental measures are deductible for tax purposes when paid. Presently, it is being considered to make expenditures for environmental measures deductible for tax purposes immediately if such measures result from governmental regulations and result in a liability to third parties.

40. Liabilities, including environmental liabilities, are reflected gross in the financial statements (i.e., not net of tax). Differences in deductions for liabilities with respect to income for tax purposes and financial reporting purposes result in deferred taxes. Deferred tax assets are only recorded when realization is beyond any reasonable doubt.

41. Two government grants are available with respect to environmental measures:

(a) A grant to stimulate the increase of expenditures in respect of environmental measures;

(b) A grant to stimulate the increased use of clean technology.

42. Apart from these grants, under very strict conditions, enterprises can claim an allowance from the Government when they are forced to incur costs as a result of new environmental regulations due to their specific situation. The allowance is meant to cover the additional costs compared to other competitors which, as a result of their situation, do not have to incur these costs.

43. No specific disclosure relating to environmental matters is required to be included in the financial statements. Environmental matters are usually not addressed in the Board of Directors' report, but may be addressed in the Managing Director's report.

Norway

44. In Norway, the enterprises Act Section 11-12.6 and the Accounting Act 21A.3 are applicable in setting out requirements with regard to financial statements. In 1989, the enterprises Act was amended to require the inclusion in the Board of Directors' report of information regarding emissions and contamination and details about environmental measures planned or performed to clean up the environment.

45. An enterprise is required to record liabilities when the liability can be measured with some degree of confidence. Such amounts are expensed as incurred. In the case of physical installations, capitalization and amortization are appropriate.

46. Expenses are generally deductible for tax purposes when recorded. Because Norwegian law does not permit differences between tax reporting and financial statement reporting, the concept of deferred taxes is not applicable in Norway.

47. Tax benefits are allowed for environmental measures in that some instances direct expensing of investments in assets required by Statens Forurensningstilsynet (State Pollution Control Board) is permissible for tax purposes.

48. Disclosures regarding contingent liabilities are required in Norway. Preferably, the information should be both quantitative and qualitative.

Sweden

49. In Sweden, the Association of Chartered Accountants has established general recommendations for the recording of contingencies. An enterprise is required to record a liability when future costs of the measure are known. Costs are generally tax-deductible when accrued. Deferred tax accounting is not allowed in Sweden.

50. Enterprises in Sweden historically have been allowed to make provisions for investment funds for tax purposes. Such funds can be utilized for, among other things, investments for environmental improvements. New tax legislation may terminate the possibility to make such provisions.

51. Any measure which has a significant financial impact should be included in the annual Board of Director's report or disclosed in the notes to the financial statements. If the financial impact is significant and can be reasonably estimated, the disclosure should be both qualitative and quantitative.

Switzerland

52. Generally accepted accounting practices in Switzerland allow, and in fact encourage, very conservative accounting. As a result, any liability that can be estimated should be recorded. Any costs related to environmental measures should be expensed immediately.

53. Enterprises are generally allowed to deduct for tax purposes all expenses that are recognized for book purposes. Accordingly, the recording of liabilities is encouraged from a tax point of view.

54. Disclosures regarding environmental measures are not explicitly required.

United Kingdom

55. In the United Kingdom, liabilities are recorded in accordance with the fundamental accounting concepts in the Statement of Standard Accounting Practice (SSAP) No. 2. Under SSAP No. 18, contingent losses are to be accrued in the financial statements "where it is probable that a future event will confirm a loss which can be estimated with reasonable accuracy at the date on which the financial statements are approved by the Board of Directors ... Disclosures should indicate the nature of contingencies, the uncertainties which are expected to affect the ultimate outcome and either a prudent estimate of the financial effect or statement that is not practicable to make such an estimate". Contingencies where the possibility of the ultimate outcome having a material effect on the financial statement is remote are not required to be disclosed.

56. Normally, the cost of environmental measures would be expensed as incurred. If a project will incur significant environmental costs at the end of its economic life, then these costs should be accrued over their economic life.

57. Costs are normally deductible for tax purposes when paid. SSAP 15 describes the appropriate treatment of deferred taxes. Deferred tax net debit balances

should not be carried as assets, except to the extent that they are expected to be recoverable.

United States

58. In the United States, FASB No. 5 provides general guidance to any enterprise considering accruing for liabilities related to environmental measures. An estimated liability from a contingency loss should be accrued by a charge to income when and if both of the following conditions are met:

(a) Information available prior to issuance of the financial statements indicates that it is probable that an asset has been impaired or a liability has been incurred at the date of the financial statements; and

(b) The amount of the loss can be reasonably estimated.

59. The requirement that a loss be reasonably estimable is intended to prevent accrual in the financial statements of amounts so uncertain as to impair the integrity of those statements.

60. All costs expected to be incurred for the clean-up of a spill or release and any anticipated fines should be recorded and accrued for. As estimating these amounts can prove to be very difficult, because actual clean-up costs are often not known until the clean-up is entirely completed, an enterprise must often rely on estimates by engineers for clean-up costs and estimates by legal counsel for any fines or penalties.

61. Ideally, under the matching concept of generally accepted accounting principles in the United States, expenses related to environmental measures should be recognized in the same period that the revenue related to the measures was recorded. However, expenses related to unexpected environmental impacts are often not identified until after the period of revenue recognition. Therefore, any expenses required for clean-up should be recognized immediately and expensed in the current period.

62. Any expenditures that either improve the safety of an asset, increase the value of the asset or increase the economic life of the asset can be considered for capitalization.

63. Under current Internal Revenue Service regulations, any environmental clean-up costs are not deductible until they are paid. Accrual within the financial statements and expensing for book purposes do not meet the requirements for deductibility for tax purposes. Only when the liability is settled may an enterprise deduct these expenditures. Normally, any future liabilities would be shown gross with deferred taxes reflected separately within the balance sheet.

64. Currently, there are no tax incentives for environmental measures. However, certain federal and state tax credits are available to certain taxpayers for implementing certain methods of energy conservation.

65. Disclosure within an enterprise's financial statements can be required under two different bodies. Privately held enterprises must follow FASB 5 in drafting note disclosures. If no accrual is made within the financial statements for a contingent loss because one or both of the conditions for accrual (see para. 58 above) are not met, disclosure may be necessary. Disclosure would be made when there is at least a reasonable possibility that a loss may be incurred. The disclosure should indicate the nature of the contingency and should give an estimate of the possible loss or range of loss or state that such an estimate could not be made. In addition, if an accrual has been made but only the minimum estimate of a possible range of loss was accrued, FASB No. 5 would require that the additional possible exposure to loss be disclosed within the notes to the financial statements. Finally, if an accrual is recorded in the financial statements at the anticipated amount, in some circumstances the amount accrued may require additional disclosure and discussion in order for the financial statements not to be misleading.

66. Public enterprises must comply with the same disclosure requirements described above and, in addition, must comply with those regulations set forth by the Securities and Exchange Commission (SEC) regarding disclosure within management's discussion and analysis of financial condition and results of operations within the annual 10K report. It requires discussion of known trends or a known demand, commitments, events or uncertainties that will result in or that are reasonably likely to result in the enterprise's liquidity increasing or decreasing in a material way.

67. Under Regulation S-K, certain disclosures are required within a public enterprise's annual 10K report. Within the "description of business" section, appropriate disclosure should be made as to the material effects that compliance with governmental provisions which have been enacted or adopted regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, may have upon capital expenditures, earnings or the competitive position of the enterprise. The enterprise should disclose any material estimated capital expenditures for environmental control facilities for the remainder of its current fiscal year and its succeeding fiscal year and for such periods as the enterprise may deem material.

68. Within the "legal proceedings" section of the 10K report, an enterprise is required to disclose any material pending legal proceedings, other than ordinary routine litigation incidental to the business.

69. In an interpretive release in May 1989, the SEC indicated that enterprises must disclose all environmental liabilities, unless they can prove such data would not someday be of material interest to investors.

III. SPECIFIC DISCLOSURE IN THE FINANCIAL STATEMENTS OF THE ENTERPRISES SURVEYED

70. The following 19 enterprises responded to the questionnaire on financial statements which was undertaken in connection with the present report. Their replies to the survey were voluntary, and their assistance with the report is much appreciated. One large oil company from the United States did not respond.

Alcan (Canada)

Alusuisse (Switzerland)

Bombay Dyeing Co., Ltd. (India)

Boliden (Sweden)

Ciba Giegy (Switzerland)

Consolidated Brathurst (Canada)

DuPont (United States)

Hoechst (Federal Republic of Germany)

Hoogovens (The Netherlands)

Imperial Chemical Industries (United Kingdom)

Norsk Hydro (Norway)

Petrobras (Brazil)

Ranbaxy Laboratories, Ltd. (India)

Rio Tinto Zinc (United Kingdom)

Royal Dutch/Shell (Netherlands/United Kingdom)

Siderurgica Belgo Mineira (Brazil)

Statoil (Norway)

STORA (Sweden)

Veba (Federal Republic of Germany)

71. In reviewing the financial statements of the enterprises surveyed, as well as those in a separate United Nations Centre on Transnational Corporations study covering 20 additional transnational corporations and the results of the Tonkin study of 200 international corporations, it was noted that disclosure with regard to environmental measures was primarily descriptive (World Survey of Published Accountants (London, Lafferty Publications Ltd., 1989)). Generally it was found in the Board of Directors' or management's reports rather than in the financial statements or notes to the financial statements. The amount of disclosure appears to be a function of the existing standards in the various countries, and both the quality and the quantity of disclosure was quite limited. The scarcity of accounting information is apparently the result of the lack of specific accounting standards for environmental measures. But, it could also indicate that enterprises were not utilizing existing standards which would have facilitated more detailed information.

72. One of the significant problems affecting the quantity and quality of disclosure was the lack of a concrete definition of an environmental measure and how it could be distinguished from normal good business practice.

73. A number of enterprises described broad environmental policies in their annual reports. Generally these were included in a separate section about health, safety and the environment. Other enterprises published and distributed either to employees or shareholders a summary of the enterprise's policies and descriptive information about the enterprise's effect on the environment.

74. Accounting policies with regard to environmental measures were noted in the oil, gas and mining sectors. In these sectors, the notes to the financial statements often include a description of the enterprise's accounting policies with regard to removal and restoration costs. In one case such costs were accrued on an annual basis, using the units of production method based on current costs, the assumed removal method and the likelihood of removal. In another case, such costs were deemed immaterial and not accrued.

75. The respondents to the questionnaire identified the following industry-specific accounting issues:

(a) In oil and gas exploration, the removal costs of drilling structures and the capping of wells are generally charged to income over the same basis and on the same basis as depletion is calculated;

(b) In mining, provisions may be set aside and amortized for the rehabilitation of the land to its original state.

However, according to Financial Reporting in the Mining Industry - A Summary of Current and Preferred Practice (Coopers and Lybrand, 1985):

> "In many cases, restoration costs are not significant when related to continuing mining operations, and thus the general accounting treatment has been to expense them as incurred. Because of the efforts of active environmental groups in many countries, the matter has become one of intensifying importance with the result that many Governments are making greater demands on mining entities. When these costs are material or potentially so, the policy for the treatment of restoration costs should be disclosed."

76. Enterprises which exploit natural resources must show them in their balance sheet as long-term assets (timber lands, oil and gas reserves, mineral deposits). Such natural resources are recorded at acquisition cost, which may include some costs of development. The carrying value of the resources is reduced as the resources are converted through the process of cutting, pumping or mining. As a result, the original cost of the resources is reduced, and depletion is recognized by the amount of the decrease. The depletion cost per unit is determined by dividing the cost (less residual value) of the natural resource by the estimated number of units available. The annual depletion cost is the depletion cost per unit multiplied by the number of units converted. This amount is deducted from the

asset account. Disclosure should be made in respect of these charges for the depletion of natural resources.

77. A number of the enterprises have prepared environmental brochures or reports for their shareholders and employees. These range from a description of the types of environmental impact an enterprise has to a summary of the emissions from specific plants.

78. The environmental audits performed by the enterprises were, for the most part, performed internally. One respondent emphasized that the value of an environmental audit is that it provides a means of monitoring the implementation of internally developed policies, as well as external requirements. It was felt that much of the usefulness of such a management tool would be lost if the results were made public.

IV. OBSTACLES TO INFORMATION DISCLOSURE

79. Enterprises mentioned a number of obstacles which can discourage an enterprise from adequately accounting for environmental measures.

80. For example, in many countries, expenses are only deductible for tax purposes when paid. As a result, there is no incentive for enterprises to record liabilities for environmental measures. Non-deductibility of expenses for tax purposes could result in a disincentive to record environmental liabilities. In order to remove the disincentive, Governments could amend tax practices to allow expenses to be deducted for tax purposes at the same time (or before) they are deductible for financial accounting purposes. To the extent other tax benefit schemes regarding environmental measures are developed and utilized by Governments, a pro-active environmental policy on the part of a given enterprise would be encouraged.

81. Earnings pressures are also noted to be a potential obstacle to a true and fair view. Since the investment community stresses earnings per share as an indication of the enterprise's performance, an enterprise's management prefers to avoid any measures that significantly reduce income. To the extent that environmental measures are not estimable, they are not recorded in the statements. An incentive exists for enterprises not to attempt to estimate liabilities.

82. As mentioned above, the definition of environmental measures may be vague. Many enterprises feel that it is very difficult (if not impossible) to separate environmental costs from other costs, particularly in the case of investment expenditures. This is because environmental improvements are part and parcel of any investment to replace or expand productive capacity. Since there are no guidelines for calculating the costs of environmental measures, it is difficult for enterprises to present such costs accurately and consistently.

V. TRENDS IN ACCOUNTING FOR ENVIRONMENTAL MEASURES

83. The following observations were made by the respondents concerning trends they observed in accounting for environmental measures:

(a) In Brazil, accounting procedures have improved significantly, however procedures related to environmental measures are not well developed. Environmental matters have often been in the press, and they are increasingly important for the whole population. Accounting procedures will most likely be developed over the course of the next five years, with the Brazilian Accountants Institute and the Comissao de Valores Mobiliarios having major roles in this development;

(b) In the Federal Republic of Germany, no concrete plans for changes in accounting and disclosure requirements have been noted. In the past, several approaches, including an "ecological balance sheet", have been discussed in literature, but have not had an impact on accounting practices to date;

(c) In India, no specific trends were noted by the respondents;

(d) In Norway, other than the new requirement that the Board of Directors' report include information regarding the enterprise's effect on the environment, no trends have been noted by the respondents;

(e) In Switzerland, more information is being requested by the public in connection with environmental measures taken by a specific enterprise. More information is given to the public, especially in the chemical industry. There is a growing awareness of the authorities and the general public regarding environmental measures, however no new trends regarding environmental measures have been noted in financial accounting;

(f) In Sweden, stricter rules related to environmental measures have been noted. However, no specific rules or regulations have been issued regarding accounting for and disclosing environmental measures;

(g) In the United Kingdom, the subject of the environment is a political issue, and it is possible that legislation will be introduced to require more action by alleged polluters. It is possible that this might lead to further disclosures in the annual accounts, but the recently enacted Enterprises Act 1989 does not contain any provisions on this subject;

(h) In the United States, there is an increasing concern both within the business community and within the general public regarding environmental measures. United States businesses are concerned over the possible impact that future required clean-ups may have on their income and cash flows. As a result, accruals for and disclosures of environmental matters will probably become more common in the future. The Securities and Exchange Commission is becoming more insistent that enterprises improve their disclosure where a trend, demand, commitment or event is likely to have a material effect on the enterprises' financial condition.

VI. RECOMMENDATIONS FROM ENTERPRISES FOR INFORMATION DISCLOSURE

84. The various respondents had the following comments regarding what the accounting and disclosure requirements for environmental measures should be in order to give a "true and fair view" of an enterprise's performance and financial position. These recommendations ranged from developing a specific accounting standard to maintaining the status quo.

A. Develop a specific accounting standard

85. "We feel that guidance in the area of environmental disclosure should be more specific and codified; possibly an accounting recommendation to provide accountants, auditors and management with a standard. Quantification of the potential liability is often difficult. Therefore, increased required disclosure would provide readers with a more useful type of information."

86. "A comprehensive study/recommendation may best be accomplished jointly between the national Association of Chartered Accountants, environmental agencies and industry. This ensures that the final product considers the issue from all aspects."

87. "An enterprise's worth in the eyes of shareholders and potential shareholders could be adversely affected through mandatory environmental disclosure. As such management may not be receptive to such disclosure. In addition such disclosure could lead to legal action."

88. "The disclosure should include a minimum of the following:

a. The environmental emissions/impact associated with the entities' business;

b. If there are possible/probable environmental issues that could lead to litigation:

The contaminant

Third party analysis of known and probable contaminants

Quantification (if possible) of clean-up costs

Environmental impact of the spill/leakage."

89. "The above recommendations if not codified properly could be seen as burdensome. Recommendations should not be restrictive, they should provide specific guidance. An exposure draft of the proposed recommendations should be made available to all potential users for discussion, since the resultant accounting and reporting changes will assist in assuring a clean environment."

90. "Environmental measure should be handled the same way as all other significant events that impact an enterprise. All already identified matters which would have a significant impact on an enterprise's financial situation should be disclosed. Additionally, future events that will have a material effect on the enterprise (e.g. new regulations) should be disclosed."

91. "Enterprises already are required to report important events that have occurred during the fiscal year or through the date of the financial statements. On the other hand, there are no specific regulations on how to report."

92. "With regard to environmental measures the accounting and disclosure requirements are not far developed. In order to give a true and fair view of the impact of an enterprise on the environment, additional regulations may be useful. Neither social accounting nor ecological balance sheets have been developed and discussion of whether it would be possible to impose such reports as requirements on enterprises has not occurred."

B. Disclose policies

93. "Disclosure of policies with respect to environmental issues in management reports published together with financial statements or separately would be helpful."

94. "... A clear distinction needs to be maintained between, on the one hand, the disclosures necessary in financial statements to provide a true and fair view of results and financial position and, on the other hand, public disclosure of environmental performance. Many environmental protection costs cannot be readily and unambiguously identified as such ... We believe that progress on public disclosure of environmental performance is to be made by encouraging statements of enterprise policy regarding the environment, against which subsequent conduct may be judged."

C. Disclose quantitative information

95. "Qualitative and quantitative disclosure regarding material environmental measures should be made."

D. Clarify accounting for liabilities

96. "Environmental measures are one among many costs incurred by business. As such, they are reflected, as appropriate, as part of the cost of an asset, as an expense or as a contingency. If an obligation exists but the related expenditure has yet to be incurred, it may be useful to disclose the amount of the liability that has been recognized and the basis on which it is being charged to income. It would distort the true and fair view of an enterprise's results and financial positions if different criteria were to be applied to

accounting for and disclosing the costs of environmental measures than applied to other types of business expense."

97. "More information about the range (upper and lower limits) of possible liability, uncertainties related to the estimated liability and reasons for not recording a liability should be disclosed."

98. "Since the primary purpose of disclosure is to provide information to the reader with respect to an enterprise's liquidity, capital resources and results of operation, the items disclosed should address these points. The primary disclosure should involve estimated ranges of future costs and likelihood of payment. Since 'risk of contamination' or 'identification as a potentially responsible party' does not necessarily mean that an environmental spill has occurred or that a clean-up is required, disclosure of these types of items could be misleading to the financial statement reader."

99. "Material contingent losses should be accrued where the amount and timing of the losses can be assessed with reasonable accuracy. Disclosure of the nature and amount of contingent losses should be made if material and if there is a probable likelihood of crystallization. This is sufficient for an understanding of the financial position of the enterprise for users of the accounts to make economic decisions. A sound method of accounting does not need to include the identification of sites."

E. Expand the Directors' report

100. "The Enterprises Act section relating to Directors' reports should be amended to extend disclosure requirements to environmental matters and measures undertaken during the year."

F. Issue a special purpose report

101. "I am not sure that general purpose accounts are the best vehicle for improving environmental behavior. Special purpose reports (confidential if necessary) to the governmental agencies responsible would probably be more effective."

G. Give incentives

102. The following suggestions to make it less burdensome from an accounting standpoint for enterprises to be pro-active in their environmental pursuits were made by the respondents:

(a) Immediate tax deductibility of estimated liabilities;

(b) Tax incentives or tax credits for clean-up;

(c) Immediate tax deductibility of pollution control equipment purchased;

(d) Ability to expense an accrual over some future period of years and offset against future revenue streams;

(e) Physical regulations are preferred over fiscal or economic instruments;

(f) Taxes on production of toxic chemicals for "orphan site" clean-ups (e.g. Superfund legislation in the United States). This would charge the end-user through higher prices for clean-up, allow enterprises to promote a "responsible image" through providing a fund for possible future problems, and would make segregated funds available for future use.

H. Remove obstacles

103. "A qualitative statement regarding the compliance with existing environmental requirements together with a plan that should lead to or help compliance should be required. Disclosure should include liabilities that have already been recognized and planned improvements. An obstacle to disclosure is that there are no standards that distinguish between what is an environmental measure and what is a technological improvement that would have been implemented in any case."

104. "The description/definition of environmental measures is understandably comprehensive. However,this presents difficulties in accounting terms since the measures described are an intrinsic part of manufacturing activity and are taken into account both consciously and subconsciously in the design and development of products and plant processes. It would be extremely difficult if not impossible to isolate expenditure relating specifically to environmental measures."

105. "Environmental issues and financial expenditures to achieve good performance in the area of the environment are considered an integral part of our normal activities and are not viewed in isolation. All expenditure, be it of a capital or ongoing operating cost nature, contains elements meeting environmental requirements. Rarely, however, is it possible to define specific 'environmental costs' associated with these aspects. We believe that it is more important that best practice routinely incorporates them rather than they be subjectively considered for 'public relations' purposes."

I. Maintain the status quo

106. "Accounting and disclosure requirements with regard to environmental measures should follow generally accepted accounting policies/international accounting standards, with environmental issues not to be dealt with separately from other contingent liability issues. Vague non-factual information is not helpful to investors and is not in the interest of the shareholders or the enterprise."

107. "Disclosure of environmental costs should not be included in the financial statements."

108. "All enterprises should follow the requirements of FASB No. 5."

109. "It is very important that an enterprise's financial statements fairly present its financial position at a given point in time. Therefore, its assets should be stated at a realizable value and any known or expected liabilities should be reflected within the balance sheet. To accrue or reflect possible liabilities that are contingent and unknown would be misleading to the financial statement reader. Only reasonably likely losses and losses that can be estimated should be recognized within the financial statements. To recognize anything in excess of that could cause some misleading and significant fluctuations in an enterprise's balance sheet that would not present an accurate picture to a reader of the financial statements. Therefore, we believe the current accounting and disclosure requirements are fair and ensure that the enterprise's financial statements are fairly presented."

VII. RECOMMENDATIONS FOR BETTER ACCOUNTING AND REPORTING FOR ENVIRONMENTAL MEASURES

110. After reviewing the foregoing report, the Intergovernmental Working Group may wish to consider the following recommendations:

A. Report of the Board of Directors/management discussion and analysis

111. The report of the Board of Directors/management discussion and analysis should set out the following:

(a) The type of environmental issues that are pertinent to the enterprise and its industry;

(b) The formal policy and programmes that have been adopted by the enterprise with respect to environmental protection measures (if a formal policy and programmes exist, it should be stated; if environmental audits are regularly carried out as a part of this policy, this should also be stated, as well as the main results, if material);

(c) The improvements in key areas that have been made since the introduction of the policy, or over the past 5/10 years, whichever is shorter;

(d) The environmental emissions targets that the enterprise has set for itself, and how the enterprise is performing relative to those targets;

(e) The extent to which environmental protection measures have been undertaken due to government legislation and, if so, the extent to which government requirements (for example, a timetable for the reduction of emissions) are being achieved;

(f) The financial or operational effect of environmental protection measures on the capital expenditures, earnings and competitive position of the enterprise for the current period and any specific impact on future periods.

B. Notes to the financial statements

112. The accounting policy notes should describe the policies adopted in accounting for environmental protection measures in, for example:

(a) Charging such amounts to operations;

(b) Capitalizing such amounts, and the amortization policy;

(c) Recording liabilities;

(d) Setting up provisions and catastrophe reserves;

(e) Disclosing contingent liabilities;

(f) Insuring against the consequences of harmful effects;

(g) The treatment of grants (government and other);

(h) Not charging or capitalizing such amounts due to tax rules.

113. When material, the following amounts should be disclosed, together with a description of the environmental measures to which they relate:

(a) The amount charged to operations in the current period (where it is not possible to segregate the amount that relates to environmental protection measures, this fact should be stated);

(b) The amount capitalized during the current period, the accumulated amount capitalized to date and the period for amortizing, or writing off, such amounts (where it is not possible to segregate the amount that relates to environmental measures, this fact should be stated);

(c) Liabilities, provisions and reserves that have been set for the current period, and amounts accumulated to date;

(d) Contingent liabilities, with an estimate of the amount involved, unless the likelihood of the confirming event is remote or the amount of the possible loss cannot be reasonably calculated (in which case the description of the contingent liability should continue to be furnished and the reason should be given why an

estimate of the amount of the loss cannot be made). Management's classification of contingencies as being probable or possible should be specifically disclosed.

114. The tax effect and the timing of the realization of the tax effect of the recording of environmental measures should be disclosed.

115. The amounts of any government or other grants, tax treatment of environmental expenditures, etc., received in the period for environmental protection measures, together with a description of the item to which they relate, should be disclosed.

VIII. RECOMMENDATIONS FOR FURTHER STUDY

116. A number of issues extend beyond the scope of the present report, but should be considered for further investigation:

(a) National laws and regulations could be further scrutinized regarding disincentives for accounting for environmental protection. Possible incentives could be explored;

(b) Accounting for the full cost of the production of goods and services could be examined. Current accounting theory takes into consideration only financial transactions, not such externalities as resource consumption and other environmental impacts. As a result, all the environmental costs of production (or other social costs, for that matter) are not included in an enterprise's accounts. Investigation should be undertaken regarding the possibilities for establishing standards for accounting for all relevant environmental costs;

(c) The definition of "environmental measures" should be further clarified. If enterprises are to disclose amounts spent on environmental measures, a clear distinction between environmental measures and measures that would have been undertaken regardless must be made. Methods for allocating part of the total costs to these environmental measures must also be designed;

(d) Special environmental reports that are not financial in nature might be a desirable source of information for the public. Standard disclosure requirements might be proposed for such reports;

(e) Any suggestions for new and/or revised standards should be circulated widely among transnational and domestic enterprises, governmental bodies, accountants, auditors and any other interested parties for comments;

(f) The number of enterprises surveyed was, for purposes of the report, necessarily limited. Obtaining a broader enterprise response might result in more insights into the obstacles limiting disclosure and elicit more suggestions for methods to improve accounting and reporting, as well as establish a network which could build support for such methods.

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PROGRAMME OF WORK OF THE INTERGOVERNMENTAL WORKING GROUP OF EXPERTS ON INTERNATIONAL STANDARDS OF ACCOUNTING AND REPORTING: APPROPRIATE MEASURES TO GIVE EFFECT TO THE WORK OF THE GROUP

Appropriate measures to give effect to the work of the Group

Report of the Secretary-General

SUMMARY

The present report discusses actions which have been taken during 19[illegible]9 to give effect to the work of the Group and proposes actions which might be taken in 1990. It also includes a list of accounting issues which the Group might want to take up in the future and suggests that a revised list be discussed and prepared.

* E/C.10/AC.3/1990/1.

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I. MEASURES TAKEN IN 1989

1. During 1989, Conclusions on Accounting and Reporting by Transnational Corporations (Sales No. E.88.II.A.18), a report of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting, was translated from English into the five other official languages of the United Nations and distributed to all organizations on the roster which are concerned with accounting and reporting. The Group's report, Objectives and Concepts Underlying Financial Statements (Sales No. E.89.II.A.18) was published in English and during 1990 will be translated into the other official languages. The United Nations Publication Unit completed work on the promotional brochure in all languages. This included creating a distinctive design which will be used in the future on all publications of the Working Group.

2. In addition, the United Nations Centre on Transnational Corporations concluded its international survey of financial statements (E/C.10/AC.3/1990/4) of 200 transnational corporations requested by the Group. The survey analysed information disclosure relating to 39 accounting items. It revealed major problems in disclosure of certain items, such as corporate position and results by segment, accounting for inflation, intra-group transactions and employment. The overall average for disclosure among the 194 enterprises actually included was 59 per cent. Such periodic monitoring can indicate to the Group the impact of its efforts and areas where more work needs to be done.

3. The proceedings of the seventh session were published in the 1989 Review of International Accounting and Reporting Issues. The Review makes available the work of the Group on an annual basis.

4. The Centre on Transnational Corporations, at the request of the Ministry of Finance of the Soviet Union, held a Workshop on Accounting for and by East-West Joint Ventures in Centrally Planned Economies, 13-15 June 1989, in Moscow. By the end of 1989, agreements for more than 1,200 joint ventures had been signed. So far, however, only a small number of them are fully operational.

5. Start-up operations must overcome many hurdles. Western partners face uncertainties regarding the repatriation of profits, access to raw materials, availability of adequately trained local management personnel and other staff and certain incompatibilities in accounting systems. The last of these factors includes the recognition of revenues, expenses and certain liabilities, depreciation methods, valuation of assets and, most important of all, the determination of profits. Such determination is critical, since a profit tax is levied once the joint venture's tax holiday runs out.

6. Of all the problems impeding the successful operation of joint ventures, accounting problems are probably the ones most easily tackled. This is due to the growing recognition that international accounting is the language of international business. A common language facilitates interaction, particularly among business partners who must be able to understand and evaluate business transactions. Consequently, there is a willingness on the part of Soviet authorities to consider

solutions based on internationally accepted standards or the lingua franca of the international business community.

7. It was this willingness that caused over 150 Soviet and international accounting experts and joint venture personnel to attend the Workshop. Its immediate aim was to identify problems arising from divergences in national accounting regulations. Once those problems were clearly spelled out, solutions were explored which would draw both partners closer to internationally accepted practices. Time was also devoted to discussing what type of training could best help Soviet accountants and students of accounting attain a better understanding of international accounting.

8. One direct result of the Workshop was the resolution of a number of problems by the Ministry of Finance. For example, revenue recognition by joint ventures now complies with the "matching" concept, in that sales receipts are recognized when the goods are dispatched or the services are rendered and not when payment is received, so that revenues are "matched" with the expenses that are instrumental in generating the revenues.

9. The Soviet Ministry of Finance also agreed to set up a Task Force, together with the Centre on Transnational Corporations, to assist, in a purely advisory manner, in matters related to the country's regulatory framework for accounting. The Task Force will have the following terms of reference:

(a) To provide international expertise to the Ministry of Finance for matters related to accounting standards for joint ventures and related matters;

(b) To identify current accounting problems in the area of joint ventures, with a view to advising on the development of binding accounting standards for joint ventures in the Soviet Union; these standards would be based on Soviet standards, taking into account international ones;

(c) To advise on appropriate accounting standards for zones of joint entrepreneurship in the Soviet Union whereby it is understood that these could be the same as for joint ventures in the Soviet Union.

The Task Force will begin its work as soon as possible with a full identification of the accounting problems currently faced by joint ventures. The work is to be completed in 1990, together with recommendations on how these problems can be resolved.

10. The third outcome of the Workshop was the introduction of international accounting courses at six Soviet institutions of higher learning, namely, Plekhanov Institute of National Economy, Moscow State University, Moscow Finance Institute, Kiev State University, Leningrad Institute of Soviet Trade and the Moscow State Institute for International Relations. These courses will be taught using the curriculum developed and discussed at the Workshop. There are three types of courses: one for upper-level accounting students; a second for joint venture practitioners and a third for university professors or trainers.

11. The Working Group was also represented at the eighteenth annual conference of the Interamerican Accounting Association held in Asunción, Paraguay, 25-28 September 1989. A member of the accounting faculty at Sao Paulo University addressed the Conference during a plenary session and explained the mandate and work of the Group. The Centre provided support for the Pan Arab Meeting on the Efforts of the United Nations to Promote Harmonization in the Field of Accounting and Reporting in Baghdad, 19-21 November 1989. That meeting is to be followed by a workshop in 1990 on standard-setting for the relevant government ministries in the Arab world.

12. During 1989 the Centre co-operated with the World Bank and the International Labour Organisation in carrying out a survey on accounting needs in Africa. Joint co-operation allowed the survey to be administered in almost every country in Africa.

13. The Centre was asked to join the International Accounting Standards Committee Steering Committee for the Development of Accounting Standards for Developing and Newly Industrialized Countries. It was agreed during the first meeting that a duplication of efforts should be avoided, and that there should be close co-operation between the Centre and the Steering Committee. Consequently, the Centre will keep the Committee informed about its survey in Africa and any resulting technical assistance programme.

14. The membership of the Working Group is unique in that it is geographically balanced. Thus, its conclusions can represent a global consensus and could have a global impact. It is important to maintain the participation of its experts, particularly those from developing countries. For that reason, at its seventh session, the Working Group recommended that a permanent trust fund be established to defray the travel costs of members from developing countries.

15. Efforts were made to raise funds for the work of the Group, but to date, they have not been successful. The Group may wish to encourage countries in a position to do so to contribute to a permanent trust fund for the Centre's work in this area.

II. MEASURES TO BE TAKEN IN 1990

16. The Centre will continue its publication programme in 1990 in which the Conclusions will be revised to include work accomplished during the seventh and eighth sessions. The Objectives report will be translated into all the official languages. The international survey of the financial statements of transnational corporations will also be published in English. The proceedings of the Workshop on Accounting for and by East-West Joint Ventures in Centrally Planned Economies will be published in both English and Russian, since there has been a great demand for the Workshop papers.

17. It is assumed that after each session, the experts in the Group will not only inform their Governments of the results but also disseminate pertinent information to national accounting associations and other interested groups. One of the most effective means for disseminating the work of the Group is through workshops

and seminars. The members of the Group are therefore encouraged to organize such meetings, and the Centre will support them within its means. One such workshop is scheduled for the Arab world. Others could be organized for Africa, Asia, Latin America and Eastern Europe.

18. A note verbale issued by the Secretary-General requesting information on accounting developments received responses from 32 countries. Members of the Group could encourage their own Governments, as well as countries within their region, to respond to the request of the Secretary-General. The responses, when received by the deadline, could be helpful to those doing research on the technical areas chosen for study by the Group, as was the case this year with information disclosure regarding environmental measures.

19. At its eighth session, the Group will consider the results of the survey on accounting needs in Africa. The elements for an effective technical assistance programme will be discussed. However, given the current financial crisis, any programme will require resources which will have to be raised from extrabudgetary sources. The Group is invited to discuss ways and means of raising such resources.

20. The Group will also consider work on accounting for environmental protection measures. The report of the Secretary-General stays well within the traditional confines of financial accounting. The Group may wish to make suggestions concerning the expansion of that work into the area of accounting for sustainable development, since extrabudgetary resources have been made available for such an extension.

III. WORK OF THE GROUP

21. At its seventh session the Group asked the Centre to revise its minimum list of accounting and reporting issues by eliminating all items already included in the agreed Conclusions and providing a brief explanatory paragraph, where necessary, for each remaining item. The Group also had at its disposal at its seventh session the list of non-agreed items, which has again been made available for consideration at its eighth session. There may be some agreed items the Group might wish to expand. Lastly, there might be new items which the Group may wish to add to a revised list which could include items for the minimum list not yet taken up, non-agreed items and items to be expanded.

A. Items remaining on the minimum list

22. The following items remain on the minimum list:

(a) Accounting for leases;

(b) Pre-paid expenses;

(c) Long-term loans and debentures;

(d) Determination of costs of sales and operating expenses;

(e) Accounting for taxes on income;

(f) Information disclosure requirements of a non-financial nature, such as:

(i) Labour and employment;

(ii) Production;

(iii) Investment programme;

(iv) Organizational structure;

(v) Environmental measures (in progress);

(vi) Transfer of technology;

(vii) Observance of legal requirements;

(viii) Transactions affecting the balance of payments;

(ix) Ownership and control;

(x) Compliance with objectives, policies and priorities of host countries;

(xi) Consumer protection;

(g) Information disclosure by transnational corporations operating in specific sectors and industrial branches, namely, banking and finance, technology transfer and consultancy, manufacturing and processing, trade, service industries, plantations, mining pharmaceuticals, food-and-beverage-processing industries, fertilizers, heavy electrical equipment and agricultural equipment;

(h) Format of information disclosure;

(i) Information disclosure requirements relating to the social and economic responsibilities of transnational corporations in national and sectoral development;

(j) Special-purpose reports;

(k) Accounting and cost accounting policies.

B. Agreed items needing additional work

23. There are also a number of items which were taken up by the Group and which appear in the Conclusions but which might be expanded upon since they are of particular interest to developing countries. They include other information items for general-purpose reporting, such as value-added, organizational structure and transfer pricing policies.

C. Non-agreed items

24. Rather than repeat the list of non-agreed items (see conference room paper 1), the Group may wish to consider the following selection of items:

(a) Direct investment (pertaining to consolidated statements);

(b) Accounting for business combinations;

(c) Foreign currency transactions and translation;

(d) Investment programme.

D. New items

25. The Group may wish to suggest new items to be included in the revised list in order to better reflect changing needs at the global and national level.

26. The Group may wish to instruct the Centre to draw up a revised list of accounting and reporting issues for the ninth session based on the discussion at the eighth session and on informal consultations with the Group.

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PROGRAMME OF WORK OF THE INTERGOVERNMENTAL WORKING GROUP OF EXPERTS ON INTERNATIONAL STANDARDS OF ACCOUNTING AND REPORTING: DISCUSSION OF ACCOUNTING AND REPORTING ISSUES IDENTIFIED DURING THE SEVENTH SESSION

Accounting for pension commitments

Report of the Secretary-General

SUMMARY

The subject of accounting for pension commitments is complex because of the diversity of pension plans, the different ways of funding, the different actuarial methods which can be used to calculate pension costs and the different demographic and economic assumptions which can be made in these calculations. Nevertheless, external parties need to know how pension commitments affect the financial situation of an enterprise. Pension commitments alter an enterprise's income and cash flow, and they represent, at a certain moment in time, liabilities to the enterprise. External users need information on the cost structure of the pension plans so that they can distinguish between the more stable labour costs directly related to the service rendered by the employees and other, more volatile costs which result from financing decisions, actuarial gains and losses, etc. Therefore, it is very important to provide external users with understandable and comparable information on those post-retirement benefits. This report makes recommendations regarding the following accounting problems relating to pension commitments:

* E/C.10/AC.3/1990/1.

(a) Allocation of liabilities and expenses;

(b) Recognition of the pension benefit expense in the enterprise's income statements;

(c) Recognition of all or part of the liability to provide future benefits in the enterprise's balance sheet;

(d) Allocation of past and prior service costs.

ACCOUNTING FOR PENSION COMMITMENTS

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INTRODUCTION

1. The present report has been prepared in order to provide the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting with background information on accounting for pension commitments in the financial statements of enterprises that have pension plans.

2. In the first section of the report, a description of the different types of existing pension plans is given. Together with the types of pension plans, the different financing and organization approaches of employers are discussed. The second section analyses the impact of pension commitments on the financial situation of an enterprise. The conclusions of this section will be applied in the third and fourth sections of this report, which deal with the presentation of pension data in the financial statements of an employer. The third section contains an analysis of the determination of the costs resulting from the pension plan and the presentation of them on the income statement of an enterprise. The influence of pension data on the balance sheet of an enterprise is the subject of the fourth section. The final section presents recommendations.

I. DESCRIPTION OF PENSION PLANS, THEIR FUNDING AND ORGANIZATION

3. Many employees are entitled to receive pension benefits after their retirement. However, the way in which these pensions are organized and financed differs among countries. Three main pension systems can be discerned. There is the government pension system, where Governments are responsible for the financing of the benefits and the payments to the beneficiaries. Second, pension commitments are made by employers. In fact, in many developed market economies, the provision of post-retirement benefits is the social responsibility of the employer. In several countries, a third pension system exists whereby Governments encourage their citizens to put money aside in a special investment account in order to have an extra pension in their old age. In return, people receive tax deductions for money invested in such individual savings accounts.

4. Problems arise in accounting for pensions under the second pension system, where pension commitments are made by the employers to their employees. Those pension commitments, without a doubt, have an impact on the financial condition of an enterprise. Therefore, it is important to provide external parties with understandable and comparable information on those post-retirement benefits. In order to understand how pension commitments influence the financial picture of an enterprise, it is necessary to briefly review the existing types of enterprise pension plans.

A. What are enterprise pension plans?

5. Put simply, a pension plan is an agreement between an employer and its employees, whereby the former agrees to pay benefits to the latter after their retirement. In economic terms, a pension is a type of deferred compensation. The employer offers compensation in the future in exchange for employee services

rendered in the present. The terms of the pension plan stipulate the retirement benefit to which an employee is entitled; this is usually called the pension formula. In addition to the pension formula, the terms of the pension plan prescribe the beneficiaries of the pension plan, the vesting requirements, the way in which the pension promises will be organized and financed (with or without contributions of the employees) and the inclusion of ancillary benefits. Besides old age pensions, the pension package can include a pension for the surviving spouse and the orphans when the employee dies and/or a pension for disabled employees. There is a great diversity of pension plans. Two major categories of pension schemes will be described, namely, defined contribution plans and defined benefit plans.

1. Defined contribution plans

6. In such a scheme the employer agrees to contribute a specific sum to the plan with or without a contribution from the employee. This periodic contribution can be laid down in the terms of the pension plan as a percentage of a worker's compensation or as a percentage of profits made by the firm. The benefits to be received by the employee are calculated, based on the contributions to the plan plus the investment return obtained on those contributions. It is implied that the benefits paid to the pensioner depend also upon the return to the investments. So the risk of poor returns and of a low pension are borne solely by the employee. This element will be very important when the influence of pension commitments on the balance sheet of the employer is discussed later.

2. Defined benefit plan

7. In the defined benefit plan, the pension benefits are defined in advance. The employer must take the necessary actions to guarantee the payment of the target figure. The risk is thus borne by the employer.

8. The amount of benefits to be paid depends on the plan's benefit formula. Plans for which the pension benefit formula is based on compensation levels are called pay-related plans. The following are the two most important types of pay-related plans:

(a) Final pay plans. According to the terms of a final pay plan the benefits are calculated as a percentage of the salary in the year before retirement or as a percentage of the average salary of the last three of five years before retirement;

(b) Career average pay plan. The benefits are related to the average salary someone has earned during his service period with the firm.

Plans for which the benefit formula are not based on compensation levels are called non-pay related plans or flat benefit plans.

9. Nowadays most pension schemes are of the defined benefit type, with calculations based on final or final average salary. In the immediate post-war period, pensions were provided by defined contribution plans. This kind of savings

account bore little relationship to actual needs after retirement. The pension industry recognized this failure and designed a different form of pension commitments. The average salary scheme emerged, and survived for awhile. Today in many enterprises average salary schemes have been replaced by final salary pension schemes, because inflation eroded the purchasing power of the career average pay plans. Defined benefit schemes are more attractive for the employees because they know beforehand, apart from future salary increases, the pension benefit they will receive when they retire.

B. Organization and financing pattern of pension commitments

10. The presentation of pension data in financial statements is influenced not only by the type of pension plan but also by the way the pension commitments are organized and financed. An employer can use the services of an insurance company to provide for its pension obligations or can finance and organize the pension payments within the enterprise or through a pension fund.

1. The enterprise finances the scheme itself

11. Essentially there are two basic methods of financing or funding which can be adopted; the pay-as-you-go system and the advanced funding or pre-funding method.

(a) Pay-as-you-go method

12. Under this system pensions are paid out of the assets of the firm when they fall due. While the pay-as-you-go system is straightforward and easily understood, it is unsatisfactory from the point of view of the employee. In event of business failure, merger, abandonment of the plan or any other factor causing the pension plan to be terminated, the employee's pension expectations may well disappear. Under this method, no financial provision is made for such a contingency.

(b) Pre-funding or advanced funding method

13. The purpose of the funding system is to accumulate sums during the working lives of employees which may be used to pay benefits to the employees when they retire or leave service and to their dependants after the employees die. The amounts accumulated are intended to secure the benefits against the employer's inability to meet his pension commitments. Three ways of funding are open:

(a) Initial funding, in which one lump sum contribution is made at the beginning of the employment period. This amount represents the present value, today, of a lifetime pension payable at retirement age. If this amount were contributed today and compounded at the assumed interest rate, the deposit would accumulate the necessary funds;

(b) Terminal funding, in which one lump sum contribution is made at the date of retirement. That contribution is the present value, calculated at retirement

age, of the pension to which the pensioner is entitled to receive in the coming years;

(c) Pre-funding or advanced funding, in which contributions are made through the whole employment period in order to accumulate enough sums to guarantee the pension payments.

14. In the case of advanced funding two possibilities exist: the employer can keep the contributions within the enterprise or he can transfer them to a separate entity, such as a pension fund or an insurance company. The former is called internal funding, and the latter is called external funding. In many countries the system of external funding is imposed by law.

15. In internal funding, resources are allocated in advance for the provision of benefits, but no separation of these amounts from the other assets of the employer is made. The employer simply recognizes the accumulation of funds to pay the pensions by the creation of a provision for pensions on his liability side of the balance sheet. Benefit payments, when due, are made directly by the employer with a reduction in the assets and a corresponding reduction in the amount of the provision. In some countries employers are allowed to use those funds accumulated within the enterprise for the operational activities of the enterprise. In other countries those funds may be kept in the enterprise, but they have to be invested in certain assets.

16. There are two types of external funding. With the help of a pension fund, the money which is set aside to provide benefits is accumulated in an external fund. At regular points in time, the employer and, in some plans, the employees as well, transfer amounts of money to a separate entity, namely a pension fund. In the fund, these contributions are invested and, when benefit payments become due, the contributions plus the investment return are used to pay the pension benefits. The second type of external funding is through an insurance company. An enterprise can purchase an annuity contract (a contract in which an insurance company unconditionally undertakes the legal obligation to provide specified benefits to specific individuals in return for a fixed lump sum or premium) with an insurance company. An annuity contract is irrevocable and involves the transfer of significant risk from the employer to the insurance company. This transfer of risk will, of course, have a serious bearing on the presentation of pension data in the financial statements of an employer.

17. Actuarial cost methods are used to determine the amounts to be financed and invested each period in order to have sufficient funds to pay the pension benefits when the employees retire. Subsection D will explain the most important elements of those actuarial cost methods, since the figures from actuarial calculations are often used in an accounting context.

C. Prevalence of privately managed pension plans

18. Privately managed pension plans are common in North America, Asia and, to a growing extent, in Europe. They are relatively rare in Africa and Latin America.

Although pension plans exist in many countries, the organizational and financial structure of those plans may differ markedly. The internal funding approach is common in the Federal Republic of Germany and Austria. Defined benefit plans operate largely on an industry-wide basis in France and the Netherlands. The French plans are managed by the Government and are funded on a pay-as-you-go basis. Private supplementary plans are virtually unknown in France. In the Netherlands, employers in industries not covered by a mandatory plan may manage their own plans. In table 1, the investment and financing methods used in the different countries are shown.

Table 1. Prevalence of privately managed pension plans

Common	Limited	Rare
Australia	Europe	Europe
North America	Austria	Greece**
Canada	France	
United States	Spain	Latin America
		Argentina
Europe	Latin America	Chile
Belgium	Brazil**	Costa Rica
Denmark**	Colombia	Mexico
Federal Republic of Germany	Ecuador	Panama
Netherlands		
United Kingdom	Asia	Asia
	Malaysia	Thailand**
Asia	Pakistan	
Hong Kong**	Singapore	Africa
India	Sri Lanka	Côte d'Ivoire
Indonesia*		
Japan*	Africa	
Philippines*	Egypt	
Republic of Korea*	Kenya	
Taiwan Province of China	Nigeria	
Africa		
South Africa*		

Source: Mercer (1988).

* Mainly defined benefit plans.

** Mainly defined contribution plans.

19. Although pension plans exist in many countries, the organizational and finance structure of those plans can differ significantly. The internal funding approach is common in the Federal Republic of Germany and in Austria. Defined benefit plans operate largely on an industry-wide basis in France and the Netherlands. The French plans are managed by the Government and are funded on a pay-as-you-go basis. Private supplementary plans are virtually unknown in France. In the Netherlands, employers in industries not covered by a mandatory plan may manage their own plans.

20. In order to finance a pension plan different options are open. The same applies for investments in pension assets. Table 2 illustrates which investments and financing methods are used in the different countries.

Table 2. Financing methods

Country or area	Investments					Remarks
	All	GS	DAC	GIC	ANN	
Australia	x					Small companies invest in DAC
Canada	x					
United States	x					Pension benefits insured by a government agency
Austria					x	Book reserves
Belgium				x		
Denmark			x			
Germany, Federal Republic of	x					Book reserves Investment regulated
Finland					x	Trust for plan with more than 50 employees
Greece			x			
Ireland	x					Multinationals insure benefits by pooling
Netherlands					x	
United Kingdom	x					
Argentina						Pay-as-you-go method
Brazil						Book reserves Investment regulated
Colombia						Advance funding required
Ecuador						Pay-as-you-go method
Honduras			x			Trusts managed by banks
Mexico						Pre-funding not required
Venezuela				x		

Table 2 (continued)

Country or area	Investments All	GS	DAC	GIC	ANN	Remarks
Hong Kong	x					Smaller plans invest in DAC
Indonesia						Book reserves; Trusts becoming popular
Japan						Trust is managed by a bank or an insurance company
Malaysia	x	x				
Philippines						Funds managed by insurance company or trust company
Republic of Korea						Investment limited in Republic of Korea
Singapore						Book reserves
Taiwan Province of China						Funds managed by designated institutions
Thailand						Investment regulated
India		x				Pay-as-you-go method
Pakistan		x				
Sri Lanka	x					
Egypt						Both trusts and book reserves are acceptable
Kenya			x			
Nigeria			x	x		
South Africa		x				Managed by insurance company

Source: Mercer (1988).

Key:

All: All investments
GS: Government securities
DAC: Deposit administration contract
ANN: Annuities

D. Actuarial cost methods or actuarial funding methods

21. Several actuarial cost methods exist to determine the financing scheme for benefits in the case of advanced funding for a defined benefit plan. Different actuarial cost methods lead to different funding patterns for the same pension plan. The two families of actuarial cost methods which are most commonly used are the accrued benefit cost methods and the projected benefit cost methods. The accrued benefit cost methods (ABCM) take into account only the service rendered to detain the current salary in order to calculate the amounts which have to be

financed in each period. The amount to be funded under this method is equal to the present value of the benefit accrual in that particular year. Only the accrued or accumulated pension rights are financed under this method. Although accrued benefits mean benefits based on current salary levels and service rendered to date, the method can be used taking into account future salary increases. The method is then called ABCM with salary projection. The projected benefit cost methods (PBCM) calculate the total pension benefit an employee will receive upon retirement and allocate the amount, over the working life of the employee, as a fixed amount or as a fixed percentage of salary. Under the PBCM, not only the earned pension rights are financed but also the pension promises, which still depend on future salary increases and future service periods.

22. In order to calculate the necessary contributions, the actuary, with the help of the management of the enterprise, must make actuarial assumptions about a large number of significant variables over a considerable time span. The main assumptions fall into two groups: demographic assumptions, which have to do with the number of employees, their age and sex distribution and their life expectancy and economic assumptions, such as future salary patterns, the return on the pension scheme's assets and future inflation. When the actuarial assumptions differ from reality a shortage or a surplus may occur in the financing. This phenomenon occurs, for example, if the returns on investment are smaller or larger than the actuarial assumed investment returns. Shortages, due to a difference between reality and the actuarial assumptions, can be recovered by additional contributions to the plan. These differences are called experience adjustments.

23. The amounts to be financed each year are known as "actuarial pension costs" in actuarial jargon. Accountants, however, treat these costs or the amount to be contributed to the plan as "accounting pension costs". Another element of confusion is the word "liability" which, when used in an actuarial context, has a different meaning than in an accounting context. When defined prospectively, an actuarial liability is equal to the present value of actuarial costs still to be incurred (that is, the present value of amounts still to be contributed to the plan). An actuarial liability, defined retrospectively, is equal to the accumulated value of past actuarial costs. Actuaries also work with such concepts as unfunded liabilities and supplemental liabilities. The actuarial unfunded liability is an expression denoting the difference between the plan's actuarial liability and its assets. A supplemental liability arises when there is a difference between the prospective actuarial liability and the retrospective actuarial liability. Differences between these two measures have the following sources:

(a) The granting of pension credits for service rendered prior to the establishment of the plan is one source. The amount to be financed is a supplemental liability, which is usually called a past service liability. The amounts contributed to the plan in order to finance this past service liability are called past service costs;

(b) If an increase in pension benefits, during the existence of the plan, is also granted for service periods already passed, then a supplemental liability occurs. This supplemental liability is usually called a prior service liability.

The amounts contributed to the plan in order to finance this prior service liability are called prior service costs;

(c) The changing of an actuarial assumption is a third source. Such a change affects only the prospectively determined actuarial liability, leaving the accumulation of past actuarial costs unaffected, and a supplemental liability (positive or negative) results. Only a negative supplemental liability (an actuarial loss) requires extra funding. A positive supplemental liability is also called an actuarial gain.

24. There are different actuarial cost methods in current use that develop different actuarial costs and different actuarial liabilities for the same underlying data and the same actuarial assumptions. This fact should be kept in mind when examining comparable pension data which could be included in financial statements (a numerical illustration of these different actuarial pension cost methods is presented in the annex).

II. INFORMATION REQUIREMENTS OF EXTERNAL PARTIES CONCERNING PENSION COMMITMENTS MADE BY THE EMPLOYER

25. In order to determine the information requirements of external parties, it is necessary to know how pension plans affect the financial situation of an enterprise. Pensions represent, without a doubt, a cash drain for the enterprise. The timing of the cash flow will be different depending on the pension finance system which is used - the pay-as-you-go system, the internal or the external funding system.

26. The amount of pension benefits paid to pensioners is also a cost for the enterprise. It can be reduced through advanced funding with positive investment returns. The timing of the cost differs among enterprises according to the organizational and financial structure of the pension plan. Pension benefits will reduce an enterprise's profit or increase its loss.

27. When an employee renders service, his pension rights accrue. Depending on the terms of the pension plan, the employer has a legal or economic obligation to pay the benefits. At the time of retirement, the employer owes the employee a certain amount of money. Consequently, pension commitments alter an enterprise's income and cash flow and they represent, at a certain moment in time, liabilities to the enterprise. External parties want, on the one hand, a clear insight into the cost structure of the pension plan and, on the other hand, they want to know if pension commitments will increase the total debt of the enterprise and thus affect the enterprise's credit rating. In order to present data on the cost and liability aspect of the pension plan in the financial statements, the following accounting problems have to be solved:

(a) How should liabilities and expenses be allocated to various time periods?

(b) What amount should be recognized as a pension benefit expense in the employer's income statement?

(c) What part, if any, of the obligation to provide future benefits should be recognized as a liability on the employer's balance sheet?

(d) How should a change in an existing plan or the introduction of a new plan be accounted for, and how to allocate past and prior service costs?

Early retirement options will not be discussed in the present report, because they often have a temporary character and their use is optional.

28. From the foregoing discussion it may be concluded that pension reporting problems can be divided into two main areas - the determination of the employer's annual pension cost and the determination of pension liabilities.

III. ACCOUNTING FOR PENSION COSTS

29. The determination of the annual pension cost depends on the way in which the pension promises are organized and financed. Different situations can be distinguished.

A. Accounting for pension costs in a defined contribution plan

30. In a defined contribution plan, the commitment of the employer is fulfilled when he makes the contributions specified in the pension plan. These contributions are the pension costs of the employer. The total amount of pension contributions to be made in a year, according to the terms of the pension plan, is equal to the pension cost of that particular year.

B. Accounting for pension costs in a defined benefit plan

1. Current practice

31. Under a defined benefit plan, an employee is entitled to receive a certain amount of money. This means that the exact total cost of providing a pension benefit is known only at the moment of retirement when the benefit is paid as a lump sum or when the pensioner dies when the benefit is paid out as a rent.

32. The main problem with defined benefit pension plans is how this total cost will be charged to the employer's income statement of the subsequent service years. For decades employers have regarded the amount, contributed to the internal or external pension fund in the case of pre-funding, or the amounts paid out as pensions under the pay-as-you-go system, as pension costs for the same period. When an enterprise has taken out an annuity contract with an insurance company, the monthly or annual premiums paid to the insurer are booked as pension costs at the date of payment and appear as a cost on the income statement of the employer of that particular period.

33. This implies the following:

(a) If an enterprise has adopted the pay-as-you-go system, the pension costs of an enterprise are the payments made to the retired employees. When the payment is made, that amount is registered as a cost. With this system, pensions are a cost to the enterprise in the year they fall due;

(b) When a company pre-funds its pension commitments, it treats the amount contributed to the internal or external fund or to the insurance companies as the pension cost of that period. The amount funded in a period is then equal to the pension cost of that period.

34. According to the matching concept, pension costs have to be charged against revenues over the service period of the employees. It becomes immediately clear that pension cost reporting in accordance with the pay-as-you-go system, terminal funding and initial funding violates the matching concept.

2. Accounting for pension costs

35. Pension costs, in the existing standards and pronouncements, are determined as a mixture of costs of a different origin, namely actuarial pension costs, which result from the service rendered by the employees, interest accruals, actuarial gains and losses and experience adjustments. How should these different components be treated?

36. Attaining comparability of pension costs among enterprises will be very difficult. One way to attain comparability, to a large extent, is to keep the different types of costs related to the pension plan separate. Each of these different components will now be discussed separately.

37. The first component is the actuarial pension cost, which is in fact the only "pure" pension cost. By "pure" pension costs is meant a cost which results directly from service rendered by the employees. Of all the costs which result from pension plans, this cost is, in fact, the only strict labour cost. From subsection I.D. on actuarial cost methods, one knows that to keep the cost component comparable between enterprises, enterprises must be convinced to use one single actuarial cost method together with a specified set of actuarial assumptions which have to be used in the actuarial calculations. If enterprises are allowed to choose between different actuarial cost methods and actuarial assumptions, enterprises should be asked to disclose in the notes to the financial statements the actuarial cost method they have used and the most important actuarial assumptions. With such information external parties can make the comparison of the "pure" pension costs of the different enterprises. If an enterprise has granted past service or prior service benefits to its employees, the pure pension cost then consists of two components until the extra cost for granting those past and prior service benefits is entirely charged over subsequent years to the income statement of the employer. The first part of the pension cost in those particular periods results from the service rendered in that particular period; this part is usually called the normal pension cost. The second part relates to the allocation of the total past and prior service cost over the remainder service period of the employees who were granted the extra benefits; this part is usually called past and prior service costs.

38. In the notes to the financial statements, enterprises should split the "pure" pension cost into a part related to this year's service and into a part related to the past and prior service liability (if there is one). With this information the user will be able to make estimates about the future path of the "pure" pension costs. The user will know which part of the "pure" pension cost will remain stable or slightly increase (normal pension cost) and which part will disappear after a while (past and prior service costs). In order to be able to make the distinction between the normal pension cost and the past and prior service cost, enterprises must use actuarial cost methods with a supplemental liability, for accounting purposes. It is necessary to point out here that an employer may use a different actuarial cost method for the determination of the financing pattern of the pension and for accounting purposes.

C. The choice of a preferred actuarial cost method for accounting purposes

39. Since different actuarial cost methods produce different actuarial pension costs, the comparison of pension costs between firms is complicated.

40. Before reviewing the literature in order to find the appropriate method for determining actuarial costs, it would be useful to consider the definition of an expense as put forward by the Intergovernmental Working Group: "An expense is recognized when it is realized that an expenditure does not produce future economic benefits. It is also recognized when a liability is incurred without the recognition of an asset, for instance, when a liability for taxation arises. When it is possible to do so, expenses are recognized in the income statement on the basis of direct association between expenses incurred and the earning of specific items of income. The process is commonly referred to as matching of expenses with revenues." 1/

41. This definition is, in fact, very broad and leaves two options open concerning pension cost accounting. According to this definition a pension cost of a particular year can be defined as an increase in the pension liability over that particular year. The second option is that the pension cost can be determined on the basis of a direct association with the service rendered by the employees in a particular period. The second option is preferred, because only in that case is information presented to external parties based on the economic substance of the transactions. This is also what the Intergovernmental Working Group intended in its Objectives and Concepts underlying financial statements: "Enterprises should emphasize the economic substance of transactions and events, even though the legal form may differ from the economic substance and suggest different treatment". 2/

42. In the accounting literature, several suggestions are made for the allocation of the total pension cost over the entire service period, but a concrete elaboration of those ideas is seldom found. The following suggestion from J. Dewhirst was very useful: "Each period's revenues should bear associated pension expense in the ratio of employee labour service received in the current period to total work life labour services expected to be received". 3/

43. In the literature of labour economics, 4/ two labour models may be discerned, which describe the relationship between wages of the employees and their marginal productivity - the spot model and the lifetime contract model. According to the spot model, the marginal productivity of a worker is in every period equal to his wage plus the present value of the pension claim earned in that period.

44. However, in the labour economics literature, evidence was found that the lifetime contract model better represented reality in the labour market than the spot model. The lifetime contract model assumes the equality over the worker's lifetime of the value of his total compensation and that of his marginal product.

45. In the accounting literature, there is one article which links the topic of pension cost accounting with labour market models. For the lifetime contract model, Pesando and Clark state: "The lifetime contract model implies that the contributions established by a projected benefit method (PBCM), 5/ or perhaps an accrued benefit method with salary projection, might be satisfactory on this account." 6/

46. In the opinion of a number of pension experts, the actuarial cost method which brings the total labour cost (wages + pension cost) most closely to the marginal product is the best allocation method for accounting purposes. It has been proved 7/ mathematically that the projected benefit cost method, which calculates the amount to be financed each year as a yearly fixed amount, minimizes the distance between the total labour cost and the marginal product of the employee.

47. In reality the method most often chosen by standard-setting bodies (IASC, FASB, CICA, ASC) is the accrued benefit method because it allows the cost of retirement benefits in any particular period to be matched with the provision of services rendered by employees during that period. The accrued benefit method is more likely than the projected benefit method to reflect the terms of defined benefit plans. This is because in defined benefit plans, the employer's promise to employees is specified in terms of how benefits are accumulated based on service, rather than on how contributions can be made to adhere to a level funding pattern. In addition, the accrued benefit method focuses on individuals, and thus it achieves a better matching of retirement benefit costs with revenues generated through the activities of individual employees. 8/

D. Accounting for the other costs resulting from the pension plan

48. In addition to pure labour costs, pension plans entail other elements, such as interest accruals, actuarial gains and losses and experience adjustments. How should they be treated? Interest accruals need to be treated differently from the others.

49. An important feature of the use of actuarial cost methods is that they assume that actuarial pension costs yield a certain investment return. In discussing interest accruals, a distinction should be made between internal funding and external funding.

50. Under the internal funding system, amounts which have been charged to the income statement of an enterprise appear on the liability side of an employer's balance sheet and are often employed in the operational activities of the enterprise. The pension money used in the production and selling activities of an enterprise will contribute to the revenue earned by the enterprise. The amount on the liability side should increase each year with the assumed actuarial investment return. The interest accrual, as it is called, represents a cost for the employer. Normally the interest accrual is added to the "pure" pension cost and presented as one amount under the labour cost. Such treatment is rather surprising because the interest accrual does not result from service rendered by the personnel. It could, in fact, be said that when the employer uses the money of the pension plan to finance his operational activities, the pension plan becomes one of the financial sources of the enterprise, along with banks and other creditors. Other financial sources usually charge interest costs when an enterprise makes use of their funds. It could therefore be said that, in the case of internal funding, the employer is borrowing money from the pension plan. The interest accruals then belong with the financial costs of the firm rather than with the labour costs.

51. Interest accruals may also appear in the case of external funding, when the employer does not make the necessary contributions to the external pension fund. The shortage in the pension fund will not only increase with the contribution still due but also with the interest accrual on that contribution. The interest accrual also results from a financing decision of the employer. When an employer prefers to use the amounts, which he normally should contribute to the fund, for his operational activities, then the enterprise is also borrowing money from the pension fund. Interest accruals in this situation should also be reported under the financial costs of a company.

52. Actuarial gains and losses result from changes in actuarial assumptions. An alteration in actuarial assumptions brings about two consequences. The first refers to a modification in future actuarial pension costs. The future "pure" pension costs will be higher or lower than the "pure" pension costs of past periods. The first consequence of an alteration in the actuarial assumptions does not bring about any accounting problems. It is the second consequence that demands attention. From subsection I.D. on actuarial pension cost methods it is clear that a change in assumptions can create a positive or a negative supplemental liability. A negative supplemental liability or actuarial loss should be financed, resulting in extra costs for the employer. Two options are open for the treatment of an actuarial loss: either the total amount can be charged to the income statement of the employer in the year in which the change in assumptions took place, or the actuarial loss may be spread over several years. According to the conceptual framework, only the first option is allowed because these changes in actuarial assumptions will not create revenue in the future. (Workers will not start working harder because of a change in actuarial assumptions.) "An expense is recognized when it is realized that an expenditure does not produce future economic benefits." 9/ The actuarial loss can be regarded as an extraordinary item, because it results from a calculation with different assumptions. The only argument which could be put forward for allocating the actuarial loss over several periods would be income smoothing, but it is not a valid one.

53. An actuarial gain may be recognized as an extraordinary revenue in the year in which it occurs or, in the case of external funding (and inspired by conservatism), the actuarial gain may stay with the pension plan and serve as a buffer for losses or future benefit increases.

54. Results related to differences between the reality and the actuarial assumptions should not be presented as labour costs. These items have no direct link with the service rendered by the employees in a particular period. As these revenues or costs result from a difference between estimations and reality, it is preferable to present them as extraordinary items. These elements should not appear every year for large amounts, as it would mean that the enterprise was working with unrealistic actuarial assumptions.

55. When an employer works with an external pension fund, the differences between the assumptions and reality and even the actuarial gains and losses can be kept to a large extent in the pension fund (for example, negative investment results may be offset by highly positive investment results obtained in other periods). When a company finances its pension commitments through an insurance company, it may stipulate in the contract that actuarial results and differences are on the account of the insurer. Therefore, the influence of differences between reality and the assumptions and of actuarial gains and losses on the income statement of an employer with external funding practices will be much less then on an income statement of an employer with an internal pension fund.

56. Normally, all these items (interest accruals, differences between reality and actuarial assumptions and actuarial gains and losses) are added together with the pure labour cost and presented as one figure on the income statement of the employer. However, these items should be separated in order to present the cost structure of the pension plan in a transparent way to interested parties. A separation of these items can be justified because these components result from different events. The actuarial pension costs are "pure" labour costs, because they are a result of the services rendered by the employees. Besides pure labour costs, pension plans entail other elements, such as interest accruals, which result from a financing decision of the employer, and actuarial gains and losses, which are caused by a change in actuarial assumptions and experience adjustments. These items have no direct relation to the service rendered by the employees. Furthermore, these elements make the total cost resulting from the pension plan volatile, whereas the "pure" pension cost would have a more or less stable pattern.

IV. INFLUENCE OF PENSION COMMITMENTS ON THE BALANCE SHEET OF THE EMPLOYER

57. Whether or not pension commitments will arise on the balance sheet of the employer depends again on the type of pension plan and the way pension commitments are organized and financed.

A. Influence of pension commitments on the balance sheet of the employer in a defined contribution plan

58. When a pension plan is of a defined contribution type, the amounts contributed to the plan are usually transferred to a separate entity. If the contributions specified in the pension plan are made by the enterprise, no liability arises. In this setting a pension liability will only arise if contributions, which according to the terms of the plan should already have been transferred to a separate entity, still remain in the enterprise. The term liability is used in this setting, because it defines exactly the amount which should be transferred to the pension fund.

B. Influence of pension commitments on the balance sheet of an employer in a defined benefit plan

59. Accounting bodies and other international organizations have issued standards and pronouncements on the presentation of pension commitments in the balance sheet of the employer. All the statements discuss pension liabilities without considering the way in which pensions are organized by the employer, namely through internal or external funding. The influence of pension promises on the balance sheet of the employer will differ according to the funding option. Before the influence of pension commitments on the balance sheet of the employer under internal or external funding is considered, it would be useful to take another look at the definition of an accounting liability.

1. An analysis of the liability concept in a pension environment

60. In accounting theory, liability is usually defined as follows: "Liabilities are obligations of a particular entity which necessitate the entity to transfer assets or render services to other entities in the future and are a result of past transactions or events." 10/ According to the definition, it is clear that only pension benefits which result from service already rendered in the past can qualify as liabilities. SFAC No. 6 states the following: "Although most liabilities rest generally on a foundation of legal rights and duties, existence of a legally enforceable claim is not a prerequisite for an obligation to qualify as a liability." 11/ Since it is generally believed that pensions can not be regarded as liabilities, because they are not legally binding, the statement is very interesting.

61. The use of actuarial liability concepts for accounting purposes (actuarial liabilities - defined prospectively and retrospectively, supplemental liabilities and actuarial unfunded liabilities) is not recommended, because they refer to amounts funded in the past or to be funded in the future.

2. The influence of pension commitments on the balance sheet, when the internal funding method is used

62. When costs related to the pension plan (for example, the "pure" pension cost, interest accruals, actuarial losses) are charged against the employer's revenues, a provision for pension commitments will increase with the same amount on the liability side of the employer's balance sheet. This provision for pension commitments will decrease when pension payments are made to the members of the plan and when an employer chooses to treat an actuarial gain as an extraordinary revenue.

63. The assets which are kept in the firm for the payment of the retirement benefits appear on the asset side of the balance sheet. If an employer is allowed to use those assets in his operational activities, the pension assets will not be discernible from the other assets of the company. When there are restrictions imposed on an employer concerning the investments of the pension assets, the pension assets should be shown separately on the balance sheet. In this way, external parties can find out whether or not a company finances its own operational activities with assets of the pension plan.

64. The internal provision represents amounts which are kept in the firm in order to guarantee the payment of the pension benefits now and in the future. If one keeps in mind the definition of an accounting liability, it becomes clear that the pension provision should be equal to or higher than the amount of accrued or accumulated pension rights. Accrued benefits represent the present value of pension rights earned by the pensioners and employees based on service rendered to date and current salaries. Those accrued pension benefits result from services rendered in the past and necessitate the enterprise to transfer assets in the future to the beneficiaries of the plan, in the case of internal funding, and to a pension fund or an insurance company, in the case of external funding. Only when the provision for pensions is equal to or larger than the amount of accrued pension benefits, the employer has taken the necessary measures to guarantee the payment of the pension benefits in a "going concern" situation. In financial accounting, the term liability is used when the amount is exactly computable. In a pension plan context, the amount of pension benefits earned by the members of the plan, based on the current salary level and the service rendered to date, is calculated only with the use of demographic assumptions (mortality and turnover) and a discount rate. Therefore, the term "provisions" is preferred for pensions. No actuarial cost method is needed to determine the amount of accrued or accumulated pension benefits.

65. When provisions exceed accrued benefits, the employer has fulfilled all his pension commitments related to services rendered in the past by his personnel. When the "pure" pension cost is determined with the help of a projected benefit cost method, the provision for pension commitments will almost always be greater than the amount of accrued pension benefits. When provisions are less than accrued pension benefits, the employer still must make contributions to the internal fund with relation to services rendered in the past. In this situation, employers should be asked to increase immediately the internal provision up to the level of the amount of accrued or accumulated pension benefits.

66. It would be interesting for external parties to divide the amount of provisions for pension commitments in the notes to the financial statements into two parts: a provision for accrued pension rights and provision for future salary increases and future service periods. The provision for accrued pension rights results only from service rendered by the employees in the past, whereas the provision for future salary increases and future service periods arises on economic grounds.

67. There is much discussion in the academic and business literature concerning whether or not past and prior service liabilities should be included in the accrued pension benefits. Some argue that past and prior service benefits should not be included in the pension liability figure or in the accrued benefits concept, because they improve the morale of the work force and as such will lead to productivity increases in the future. For example, it is argued that, although the past service obligation may be measured in terms of employees' service prior to the date of the scheme's inception or amendment, it is not given in exchange for such past services but rather in exchange for future services from the employees concerned. This follows the principle that employers do not give promises in exchange for nothing. As a consequence, a past service actuarial liability does not represent an accounting liability. 12/ It is suggested that because the granting of past and prior service benefits would entail future benefits in the form of an improved morale, the earned pension rights should not be regarded as a liability.

68. The first aspect to investigate is if these extra benefits improve the morale. In the literature on labour economics there is evidence that the instalment of a pension plan or an increase in the pension benefits decreases the mobility of the workers. As a result, the hiring and selection costs of the firm will decrease, and the productivity might increase due to the smaller turnover of workers. The fact that past and prior service benefits create savings in the future is an argument in favour of allocating the costs of granting these benefits over the remaining service period of those workers (cfr. conceptual framework expired and unexpired costs). Although these benefits will bring about savings for the enterprise in the future, the beneficiaries are entitled to those benefits, because they are granted for services rendered in the past. Past and prior service benefits should therefore be included in the accrued benefits.

69. At the moment of origin the amount of past and prior service benefits will appear on the liability side of the employer's balance sheet. On the asset side, the same amount will appear as a deferred cost. In this proposed reporting system, the total amount of past and prior service benefits will be included in the provision for accrued pension benefits. The deferred cost resulting from the extra benefits, which appears on the asset side of the balance sheet, will be charged to the income statement over the remaining service period of those workers who will benefit from the past and prior service commitments. By "a part of the remaining service period" is meant the moment of attribution of the extra benefits until the day the worker is entitled to retire.

70. In general, employers with an internal pension fund will notice an increase in their assets with the amount of the pension assets and an increase in the liability side of the balance sheet with the amount of the provision for pension commitments. In certain literature it is suggested that these elements should be kept off the balance sheet and mentioned only in the notes to the financial statements.

71. It should be noted that eliminating the provision for pension commitments and the pension assets from the balance sheet is impossible, if pension assets are invested in the operational activities of the enterprise. In that case, an employer must show on the balance sheet all the assets used for production and/or selling activities. In the second situation, one is able to eliminate pension assets and pension provisions through compensation from the balance sheet. This, however, gives a distorted picture of the financing and organizing decisions an employer has taken. If an employer opts for internal funding, he must not report his pension data as if the pension fund were external to the enterprise. There are no accounting arguments which plead in favour of compensation. The main reason why business managers want compensation is that they hope to improve the enterprise's credit rating by such an operation. In order to give a true and fair picture of the situation of an enterprise with an internal pension fund, pension assets and pension provisions should be kept on the balance sheet, and the pension provisions should always be equal to or greater than the accrued pension rights.

3. The influence on the balance sheet of pension commitments when the external funding method is used

72. The influence of pension commitments on the balance sheet of an employer who uses external funding is somewhat different and will depend to a large extent on the financial situation of the fund. Elements which might put pension elements on the balance sheet of the employer are the following:

(a) If an employer charges a certain amount as pension cost to his income statement, but transfers a smaller amount to the fund then a provision for pensions will appear on the balance sheet of the employer;

(b) If the contribution to the pension fund is greater than the pension cost reported on the income statement of the employer, a pre-paid pension cost will then appear on the asset side of the balance sheet. It is impossible to find pre-paid pension costs on a balance sheet together with a provision for pensions.

73. When an employer charges a certain amount as pension cost on his income statement and, at the same time, transfers that same amount to the pension fund, then no figure related to the pension plan will appear on the balance sheet of the employer, except when pension assets in the fund, valued at a "fair" value, are smaller than the accumulated pension benefits (that is, pension rights earned by the beneficiaries according to the terms of the plan based on service rendered to date and current salary levels). In the pension fund context, an asset is worth only what a willing buyer will pay for it. This means that if there is a market for the pension assets, market value will be preferred to historical cost value.

74. Under an accrued benefit funding approach, pension assets will be equal to or higher than the accrued or accumulated pension benefits if actuarial assumptions match reality or if the deviation between the actuarial assumptions and reality is positive. If an employer takes a projected benefit finance approach, then not only are the accumulated pension rights financed but also the pension rights which still depend on future services and future salary increases. As a result, a pension provision is more likely to occur on a balance sheet of an employer who uses an accrued benefit funding approach than on the balance sheet of one who uses a projected benefit funding approach.

75. A pension provision might arise on the balance sheet of the employer on the following occasions:

(a) When an employer grants benefits periods before the instalment of the pension plan or increases the benefits for past service periods. The debit side of this transaction will be a deferred cost. From the moment these past and prior service benefits are funded in the pension fund, the pension provision will disappear from the balance sheet of the employer. The funding rhythm of the pension provision resulting from past and prior service benefits can differ from the allocation rhythm of the deferred cost over the subsequent periods - it can be slower or faster;

(b) When, due to negative investment results or actuarial losses, the accrued pension benefits become higher than pension assets in the pension fund, a pension provision will arise on the balance sheet of the employer if the employer does not make extra contributions to the fund in order to increase pension assets again up to the level of the accumulated pension rights.

76. Thus, a provision for pensions arises on the balance sheet of an enterprise with an external fund when the pension assets valued at 'fair value' are smaller than the amount of accrued pension rights. The notes should indicate whether the provision for pensions on the balance sheet is for accrued pension rights (when accrued pension rights are greater than pension assets) or for future salary increases and future service periods.

77. When an employer uses an external pension fund, the disclosure of the following elements in the notes would be useful for external parties:

(a) The amount of accrued pension rights earned by the employees;

(b) The total amount of pension assets valued at "fair value";

(c) The composition of the pension assets;

(d) The valuation methods for the pension assets.

The first two elements would allow external parties to judge the financing effort an enterprise has made in order to finance pension rights which still depend on service to be rendered in the future and future salary increases. The third element would communicate information on the riskiness of the investment policy of

the fund managers. This information should be explicitly required if the financial statements of the pension fund of the enterprise are not available for external parties.

78. When a pension cost appears on the income statement of the employer and the same amount is transferred to the insurance company, there will be no influence on the balance sheet of the employer. If a smaller amount is transferred to the insurance company, the difference will end up in a pension provision on the liability side of the balance sheet. This will be the case when a PBCM is used for accounting purposes, and the transfer of funds to the insurance company is done on an accrued benefit basis. These situations will be likely to arise as employers, in their agreements with insurance companies, try to delay as much as possible the payments to the insurer. In order to obtain equal treatment among employers with an external pension fund and employers with an annuity contract, it should be requested that amounts of accrued pension rights which are not guaranteed by the insurance company be presented in a provision for pensions on the balance sheet of the employer. If the total pension cost is allocated over the service periods on the basis of an ABCM or a PBCM, then a provision for pensions which includes the amount of unsecured accrued benefits will automatically arise on the balance sheet. In the notes to the financial statements, an employer should mention the name of the insurance company which administers the fund.

V. RECOMMENDED ACCOUNTING METHODS AND INFORMATION DISCLOSURE CONCERNING PENSION PLANS IN THE FINANCIAL STATEMENTS OF AN ENTERPRISE

79. Pension plans have an impact on the financial situation of an enterprise. Pension commitments alter an enterprise's income and cash flow, and they represent, at a certain moment in time, liabilities to the enterprise. Therefore, it is important to provide external users of financial statements with understandable and comparable information on those post-retirement benefits. Before identifying certain minimum disclosures and appropriate methods of accounting for pension costs, it is useful to review key concepts in pension cost accounting, which are defined in the glossary at the end of the present report.

A. Disclosure of pension data in the notes to the financial statement

80. The information disclosed in the notes can be divided into two parts - descriptive information given and numerical data.

81. Under descriptive information, the following elements should be disclosed:

(a) Type of pension plan, namely defined contribution plan or defined benefit plan (career average, final pay or flat benefit type);

(b) Type of commitment an enterprise undertakes (pension payments can be unconditional or on condition of certain events);

(c) Organizational structure of the pension plan; an internal pension fund, an external pension fund or an insurance company. When an enterprise uses an insurance company, the name of the insurance company should be disclosed.

82. The section on numerical data should contain the following elements:

(a) The actuarial cost methods which are used for accounting and financing purposes, together with all demographic and economic assumptions including the assumption on the investment return;

(b) With regard to the pure pension cost component, this figure should be divided into the normal pure pension cost and the past and prior service pension cost, if necessary;

(c) If actuarial gains or losses have a serious influence on the extraordinary results, the origin of the actuarial gain or loss should be explained.

83. In the notes the provision for pensions shown on the balance sheet should be broken down. It should be specified whether a part or the total amount of the provision for pensions refers to accrued benefits (provision for accrued pension benefits), or if a part or the total amount of the provision for pensions refers to benefits which depend on future service periods and future salary increases (provisions for future salary increases and future service periods).

84. When the enterprise has an external pension fund, the following information should be disclosed in addition to the elements enumerated above:

(a) Amount of accrued pension rights earned by the employees;

(b) Total amount of pension assets valued at "fair value";

(c) Composition of the pension assets;

(d) Valuation methods applied to the pension assets.

85. The disclosure of pension data by transnational corporations will be more complicated than by domestic enterprises, because a transnational corporation is likely to have a different pension plan for its employees in each country where it operates.

B. Accounting methods for pension costs

1. Defined benefit plans

(a) The income statement

86. The costs resulting from the pension plan may be broken down into three major components. For each component the recommended accounting treatment will be presented.

(i) The "pure" pension cost component

87. This element results directly from the services rendered by the employees. Consequently, either the accrued benefit method or the projected benefit method may be used. The accrued benefit method may be simpler to apply, and it may result in more comparable results since it is required by many standard-setting bodies. However, based on economic criteria, the use of a projected benefit cost method which allocates the total pension cost over the service period as a level amount, is preferred for accounting purposes. When past and prior services are granted, a PBCM with supplemental liability is preferred to guarantee the necessary information to interested parties. In this framework, a distinction can be made between the yearly recurring pension costs and the amount which is due to past and prior service benefits with a temporary character. An employer can always choose a different actuarial cost method to determine the funding pattern of his pension commitments. This will usually lead to the presentation of pension elements on the balance sheet of the employer.

(ii) Interest accruals

88. These elements result from a financing decision taken by the employer. These amounts should therefore be presented on the income statement under the heading financial costs.

(iii) Actuarial gains and losses and experience adjustments

89. Actuarial gains and losses result from a change in actuarial assumptions, and experience adjustments are caused by a difference between the actuarial assumption and reality. These elements have no direct link with the services rendered by the employees, neither will they generate revenue in the future. They are a consequence of calculations and estimations. The appropriate treatment, therefore, is to charge them as extraordinary results to the income statement in the year in which they occur.

(b) The balance sheet

90. The impact of pension plans on the balance sheet will be different according to the organization and funding practices of the firm.

(i) Internal funding

91. In a situation with internal funding, a provision for pensions will be found on the liability side of the balance sheet of the employer. The amount which is shown under the provision for pensions heading represents the amount of funds which is kept in the firm in order to guarantee the pension payments. The provision increases when costs resulting from the pension plan are charged against the employer's revenues. The provision decreases when pensions are paid to the beneficiaries and when an actuarial gain is recognized.

92. Provisions for pensions should always be equal to or greater than the amount of accrued or accumulated pension rights. (Accrued benefits = present value of pension rights earned by the pensioners and employees based on service rendered to date and current salaries.)

(ii) External funding

a. Through a pension fund

93. A provision for pensions will appear on the balance sheet of the employer when the pension assets in the pension fund, valued at "fair value", are smaller than the amount of accrued pension rights. In a situation where accrued pension benefits are adequately funded, a provision for pensions or pre-paid pension costs can occur on the balance sheet due to timing differences between the funding pattern and the expense pattern.

b. Through an insurance company

94. When the pension cost which appears on the income statement of the employer is equal to the premium paid to the insurance company in that period, then no figure relating to the pension plan will appear on the balance sheet of the employer. When a smaller amount is transferred to the insurance company, a provision for pensions will arise on the balance sheet.

(c) Past and prior service benefits under external and internal funding

95. The amount of past and prior service benefits has to be taken into account when one calculates the amount of accrued pension benefits. As the granting of past and prior service benefits results in less mobility and, as a consequence, lower selection and hiring costs and perhaps a productivity increase due to a lower turnover rate, the total cost can be allocated over the remaining working life of the work-force. As long as the amount of the past and prior service liability is not expensed, a deferred pension cost will remain on the asset side of the balance sheet.

2. Defined contribution plans

(a) The influence on the income statement of the employer

96. The pension cost in a particular period should be equal to the contribution made, or to be made, in that period according to the terms of the pension plan.

(b) The influence on the balance sheet of the employer

97. In this setting, a pension liability will only arise if contributions which, according to the terms of the plan should already have been transferred to a separate entity, still remain in the enterprise.

Annex

NUMERICAL EXAMPLE OF THE DIFFERENT ACTUARIAL COST METHODS

DATA

Pension formula: The pension benefit is a lump sum amount which the employee receives when he retires.

Pension benefit = number of years of service x 0.1 (final salary)

Investment return assumption: 7 per cent

Plan turnover assumption: 0

The plan turnover assumption gives the probability that an employee leaves the company. For calculation purposes, one usually uses the opposite probability, namely the probability that an employee reaches retirement within the firm. In this case, this is 1.

Salary evolution:

Year	Number of years of service	Salary
1980	1	100 000
1981	2	115 500
1982	3	132 300
1983	4	162 067
1984	5	194 481

Actuarial pension costs and actuarial pension liabilities (restrospectively defined) under the different actuarial cost methods

Year	Number of years of service	Actuarial pension cost	Actuarial pension liability
ABCM, current service + current salary			
1980	1	7 629	7 629
1981	2	10 693	18 856
1982	3	14 490	34 666
1983	4	23 493	60 586
1984	5	32 414	97 240
ABCM, current service + final salary			
1980	1	14 836	14 836
1981	2	15 875	31 751
1982	3	16 986	50 958
1983	4	18 176	72 704
1984	5	19 449	97 240
PBCM, fixed amount			
1980	1	16 909	16 909
1981	2	16 909	35 002
1982	3	16 909	54 361
1983	4	16 909	75 074
1984	5	16 910	97 240
PBCM, fixed percentage of salary			
1980	1	12 279	12 279
1981	2	14 182	27 320
1982	3	16 245	45 478
1983	4	19 900	68 561
1984	5	23 880	97 240

Glossary

Accrued benefit cost method (ABCM): A method which takes into account only the service rendered to date and the current salary in order to calculate the amounts which have to be financed in each period. This method can take into account future salary increases. Then this method is called ABCM with salary projection.

Actuarial cost methods: Methods used to determine the amounts to be financed and invested each period in order to have sufficient funds to pay the pension benefits. To calculate the necessary contributions, a number of demographic and economic assumptions about a number of variables have to be made, including demographic assumptions - the number of employees, their age and sex distribution and their life expectancy, and economic assumptions - such as future salary patterns, the return on the pension scheme's assets and future inflation.

Actuarial liability: Prospective actuarial liability is equal to the present value of actuarial costs still to be incurred (the present value of amounts still to be contributed to the plan). Retrospective actuarial liability is equal to the accumulated value of post-actuarial costs.

Actuarial pension costs: Amounts to be contributed to the plan each year (also known as accounting pension costs).

Actuarial unfunded liability: The difference between the plan's actuarial liability and its assets.

Defined benefit plan: Retirement benefit plan under which the pension benefits are defined in advance. The employer must take the necessary actions to guarantee the payment of the target figure. The risk is thus on the side of the employer. The amount of benefits to be paid depends on the plan's benefit formula. Plans for which the pension benefit formula is based on compensation levels are pay-related plans. The two most important types of pay-related plans are final pay plans and the career average pay plan. Plans for which the benefit formulae are not based on compensation levels are called non-pay related plans or flat benefit plans.

Defined contribution plan: Retirement benefit plan under which the employer agrees to contribute a specific sum to the plan with or without a contribution from the employee. This periodic contribution can be laid down in the terms of the pension plan as a percentage of a worker's compensation or as a percentage of profits made by the firm. The benefits to be received by the employee are calculated based on the contributions to the plan plus the investment return obtained on those contributions. This implies that the benefits paid to the pensioner depend also upon the return to the investments.

Interest accrual: It is assumed that actuarial pension costs yield a certain investment return. Actuarial gains and losses result from changes in actuarial assumptions.

Pension plan: An agreement between an employer and its employees whereby the former agrees to pay benefits to the latter after their retirement. In economic terms, a pension is a type of deferred compensation. The employer offers compensation in the future in exchange for employee services rendered in the present.

Projected benefit cost methods (PBCM): A method which calculates the total pension benefit an employee will receive when he/she retires and allocate this amount over the working life of the employee, as a fixed amount or as a fixed percentage of salary. Under PBCM, not only the earned pension rights are financed, but also the pension promises which still depend on future salary increases and future service periods.

Pure pension cost: A cost resulting directly from the service rendered by an employee. Other costs which have no direct link with service rendered by employees are interest accruals, actuarial gains and losses and experience adjustments.

Supplemental liability: Arises when there is a difference between the prospective actuarial liability and the retrospective actuarial liability.

Notes

1/ Objectives and Concepts Underlying Financial Statements (United Nations publication, Sales No. E.89.II.A.18), art. 74, p. 19.

2/ Ibid., art. 14, p. 6.

3/ Dewhirst, J., "A conceptual approach to pension accounting", The Accounting Review (April 1977), p. 366.

4/ See, for example, Ehrenberg, R. and Smith, R., Modern Labor Economics, Theory and Public Policy, 2nd edition (Glenview, Scott, Foresman and Company, 1985); Fleisher, B. and Kniesner, T., Labor Economics Theory, Evidence and Policy, 3rd edition (Prentice Hall Inc., 1984); Ippolito, R., "The labor contract and true economic pension liabilities", The American Economic Review, vol. 75, No. 5 (1985), pp. 1031-1043; Lazear, E., "Why is there mandatory retirement?", The Journal of Political Economy, vol. 87, No. 6 (1979), pp. 1261-1284; Medoff, J. and Abraham, K., "Experience, performance and earnings", Quarterly Journal of Economics, vol. XCV, No. 4 (1980), pp. 703-735; and Medoff, J. and Abraham, K., "Are those paid more really more productive? The case of experience", The Journal of Human Resources, vol. XVI, No. 2 (1981), pp. 186-216.

5/ The projected benefit cost methods calculate the total pension benefit an employee will receive when he retires and allocate this total amount over the service period of the employee as a fixed amount or as a fixed percentage of salary.

6/ Pesando, J. and Clark, C. "Economic models of the labor market and pension accounting: an exploratory analysis", The Accounting Review, No. 4 (1983), p. 740.

7/ Jorissen, A., "Extra legale pensioenen in de jaarrekening: de problematiek van de rapportering door werkgever en pensioenfonds", unpublished doctoral dissertation, UFSIA, Antwerpen, 1988, pp. 440-447.

8/ See E/C.10/AC.3/1989/CRP.1, paras. 44-48.

9/ Objectives and Concepts ..., art. 74.

10/ Kam, V., Accounting Theory (John Wiley and Sons, 1986), p. 65.

11/ FASB, Statement of financial accounting concept No. 6, Elements of financial statements, a replacement of FASB concept No. 3, Financial Accounting Standards Board, 1985, p. 13.

12/ Napier, C., "The pensions accounting debate", Accountancy, The Institute of Chartered Accountants of England and Wales, January, 1983, p. 115.